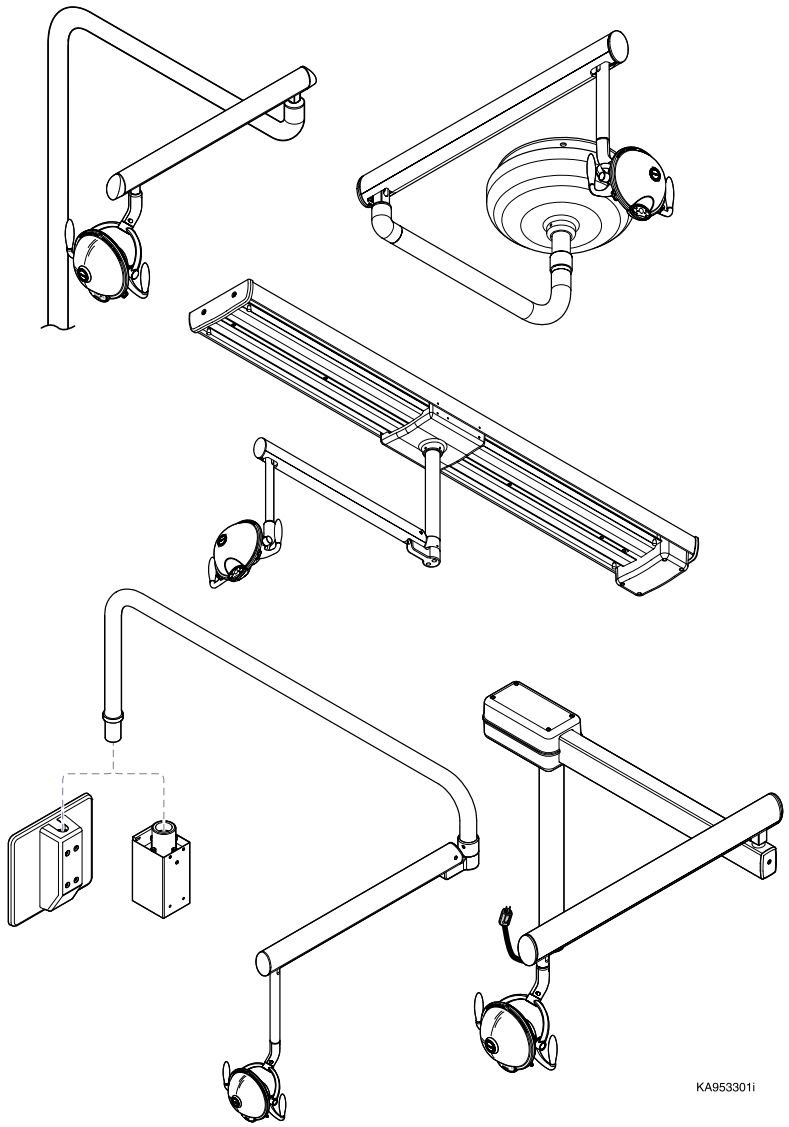
Go To Table Of Contents

Dental Lights

Service and Parts Manual

Ceiling Mounted
Chair Mounted
Track Mounted
Universal Mounted
Wall/Cabinet Mounted

Serial Number Prefixes:
NW & RE



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TRAINED TECHNICIANS ONLY

SF-1622

Part No. 004-0284-00 Rev. E (1/01/04)

Go To Table Of Contents

TABLE OF CONTENTS

Section/Paragraph ..... Page

IMPORTANT INSTRUCTIONS
General Safety Instructions ii
Safety Alert Symbols ii
Warranty Instructions ii

SECTION I GENERAL INFORMATION
1.1 Scope of Manual 1-1
1.2 How to Use Manual 1-1
1.3 Description of Midmark Dental Light 1-1
1.4 Standard Torque Specifications 1-3
1.5 Specifications 1-3
1.6 Parts Replacement Ordering 1-10

SECTION II TESTING AND TROUBLESHOOTING
2.1 Operational Test 2-1
2.2 Troubleshooting Procedures 2-4

SECTION III SCHEDULED MAINTENANCE
3.1 Scheduled Maintenance 3-1

SECTION IV MAINTENANCE / SERVICE INSTRUCTIONS
4.1 Introduction 4-1
4.2 Junction Box Access 4-1
4.3 Light Bulb Removal / Installation 4-2
4.4 Bulb Socket Removal / Installation 4-2
4.5 Light Beam Focus Adjustment 4-5
4.6 Light Control Pendant Removal / Installation 4-6
4.7 Console & LR Light Transformer Removal / Installation (Applies to chair mounted units powered with a J-Box) 4-7
4.8 Ceiling Light Transformer Removal / Installation 4-9
4.9 Ceiling Light Fuse Removal / Installation 4-9
4.10 Track Light Transformer Removal / Installation 4-10
4.11 Track Light Fuse Removal / Installation 4-11
4.12 Wall / Cabinet Light Transformer Removal /Installation 4-12
4.13 Wall / Cabinet Light Fuse Removal / Installation 4-13
4.14 Universal Light Transformer Removal / Installation 4-14
4.15 Universal Light Fuse Removal / Installation 4-15

Section/Paragraph ..... Page

4.16 Pressure Switch Removal / Installation (Applies to chair mounted units powered with a J-Box) 4-16
4.17 Circuit Breaker Removal / Installation (Applies to chair mounted units powered with a J-Box) 4-17
4.18 Fuse Holder Assembly Removal / Installation (Applies to chair mounted units powered with a J-Box) 4-18
4.19 Light Control Board Removal / Installation 4-19
4.20 AUTO ON Mode Set Point Adjustment 4-20
4.21 Circuit Breaker Reset / Fuse Replacement 4-21
4.22 Flex Arm Spring Tension Adjustment 4-22
4.23 Pivot Joint Tension Adjustments 4-22
4.24 LR Light Arm Leveling 4-23
4.25 Console Light Arm Leveling 4-24
4.26 Ceiling Light Arm Leveling 4-26

SECTION V SCHEMATICS / DIAGRAMS
5.1 Electrical Schematics / Wiring Diagrams 5-1

SECTION VI PARTS LIST
6.1 Introduction 6-1
6.2 Description Of Columns 6-1
6.3 Torque Specifications And Important Assembly Notes 6-1
Pictorial Index:
L/R Mounted Light 6-2
Console Mounted Light 6-3
Ceiling & Track Mounted Light 6-4
Wall & Cabinet Mounted Light 6-5
Universal Mounted Light 6-6
Lighthead Assembly 6-7
Flex Arm Assembly:
Chair Mounted Lights 6-8*
Universal Mounted Lights 6-9*
Ceiling Mounted Lights 6-10*
Track, Wall, & Cabinet Mounted Lights 6-11*
L/R Light Mounting Components 6-12
L/R Lower Arm Assembly 6-13*
Console Light Mounting Components 6-14
Console Bearng Assembly:
Midmark Console 6-15
Knight Console 6-16
Ceiling Light Mounting Components 6-17

(*) Indicates that there has been a serial number break for the illustration and that there are additional point page(s) following the original page.

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TABLE OF CONTENTS

Section/Paragraph ..... Page

Ceiling Plate Assembly 6-18
Flex Arm / Lighthead Assembly-
Track, Wall, & Cabinet Mounted Lights ... 6-19
Track Assembly 6-20
Trolley Assembly 6-21
Wall Mount Assembly 6-22
Cabinet Mount Assembly 6-23
Flex Arm / Lighthead Assembly -
Universal Mounted Light 6-24

Section/Paragraph ..... Page

Fixed Arm Assembly- *Universal Light* 6-25
Mounting Posts - *Universal Light* 6-26
Power Supply Assembly 6-27
LR Bracket Components -
Knight Chairs 6-28
Midmark Chair 6-29
LR Bearing Upgrade Kits -
Midmark Chairs 6-30
Knight Chairs 6-31

COMMENTS 7-1
FAX ORDER FORM 7-2

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General Safety Instructions

Safety First: The primary concern of Midmark Corporation is that this light is maintained with the safety of the patient and staff in mind. To assure that services and repairs are completed safely and correctly, proceed as follows:

(1) Read this entire manual before performing any services or repairs on this light.

(2) Be sure you understand instructions contained in this manual before attempting to service or repair light.

Safety Alert Symbols

Throughout this manual are safety alert symbols that call attention to particular procedures. These items are used as follows:

DANGER

A DANGER is used for an imminently hazardous operating procedure, practice, or condition which, if not correctly followed, will result in loss of life or serious personal injury.

WARNING

A WARNING is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in loss of life or serious personal injury.

CAUTION

A CAUTION is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

An EQUIPMENT ALERT is used for an imminently or potentially hazardous operating procedure, practice, or condition which, if not correctly followed, will or could result in serious, moderate, or minor damage to unit.

NOTE

A NOTE is used to amplify an operating procedure, practice or condition.

Warranty Instructions

Refer to Midmark “Limited Warranty” printed in the Installation and Operation Manual for warranty information. Failure to follow guidelines listed below will void the warranty and/or render the Light unsafe for operation.

- In event of a malfunction, do not attempt to use light until necessary repairs have been made.
- Do not attempt to disassemble light, replace malfunctioning or damaged components, or perform adjustments unless you are one of Midmark’s authorized service technicians.
- Do not substitute parts of another manufacturer when replacing inoperative or damaged components. Use only Midmark replacement parts.

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Return To Table Of Contents

SECTION I
GENERAL INFORMATION

1.1 Scope of Manual

This manual contains detailed troubleshooting, scheduled maintenance, maintenance, and service instructions for the Midmark Dental Light. This manual is intended to be used by Midmark's authorized service technicians.

1.2 How to Use Manual

A. Manual Use When Performing Scheduled Maintenance.

(1) Perform inspections and services listed in Scheduled Maintenance Chart (Refer to para 3.1).

(2) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance / service instructions (Refer to para 4.1).

B. Manual Use When Unit Is Malfunctioning And Cause Is Unknown.

(1) Perform an operational test on light (Refer to para 2.1).

(2) Perform troubleshooting procedures listed in Troubleshooting Guide (Refer to para 2.2).

(3) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance / service instructions (Refer to para 4.1).

C. Manual Use When Damaged Component Is Known.

(1) Replace or adjust component in accordance with maintenance / service instructions (Refer to para 4.1).

1.3 Description of Midmark Dental Light

A. General Description (See Figure 1-1).

The Midmark Dental Light is a dental exam / procedure light designed for the general dentistry market. The chair mounted light version is powered by a universal power supply (contains a transformer and other control switches) which is typically mounted in a junction box. The ceiling / wall / cabinet / track, or universal light version is powered by a transformer located within the light's mounting housing. The lighthead is operated thru a touchpad membrane located on the lighthead itself. The light can be mounted a variety of ways including chair mounted, ceiling mounted, wall mounted, cabinet mounted, universal mounted, and track mounted.

B. Major Serviceable Components (See Figure 1-1).

The major serviceable components *for the light and arm portion of the dental light system* are the lighthead assembly (1) which includes the touchpad membrane switch panel (2), light socket (3), lighthead pivot joint tension assemblies (4a, 4b, and 4c), and focus mechanism (5), the flex arm assembly (6) which contains the light PC board (7) and spring tension assembly (8).

The ***chair mounted light*** also contains a universal power supply (9) which contains the transformer (10), pressure switch (11), circuit breaker (12), and two line fuses (13).

The ***ceiling mounted light*** also contains a transformer (14), line fuse (15), and a leveling assembly (16).

The ***wall mounted light*** also contains a transformer (17) and line fuses (18).

The ***cabinet mounted light*** also contains a transformer (19) and line fuses (20).

The ***universal mounted light*** also contains a transformer (21) and line fuses (22).

The ***track mounted light*** also contains a transformer (23) and a line fuse (24).

C. Theory of Operation (Refer to Figures 5-1 thru 5-6 for electrical schematics / wiring diagrams.

Electrical Power

115 VAC +/- 11.5 VAC line voltage is supplied thru line fuse(s) to the transformer. If too much current is drawn by lighting system's circuitry or if there is a voltage spike, two fuses are provided to protect the Light's Electrical System. The transformer steps the line voltage down and supplies a secondary output voltage of 19.4 +/- 2.0 VAC to the light control board based on an ideal 115 VAC input.

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SECTION I
GENERAL INFORMATION

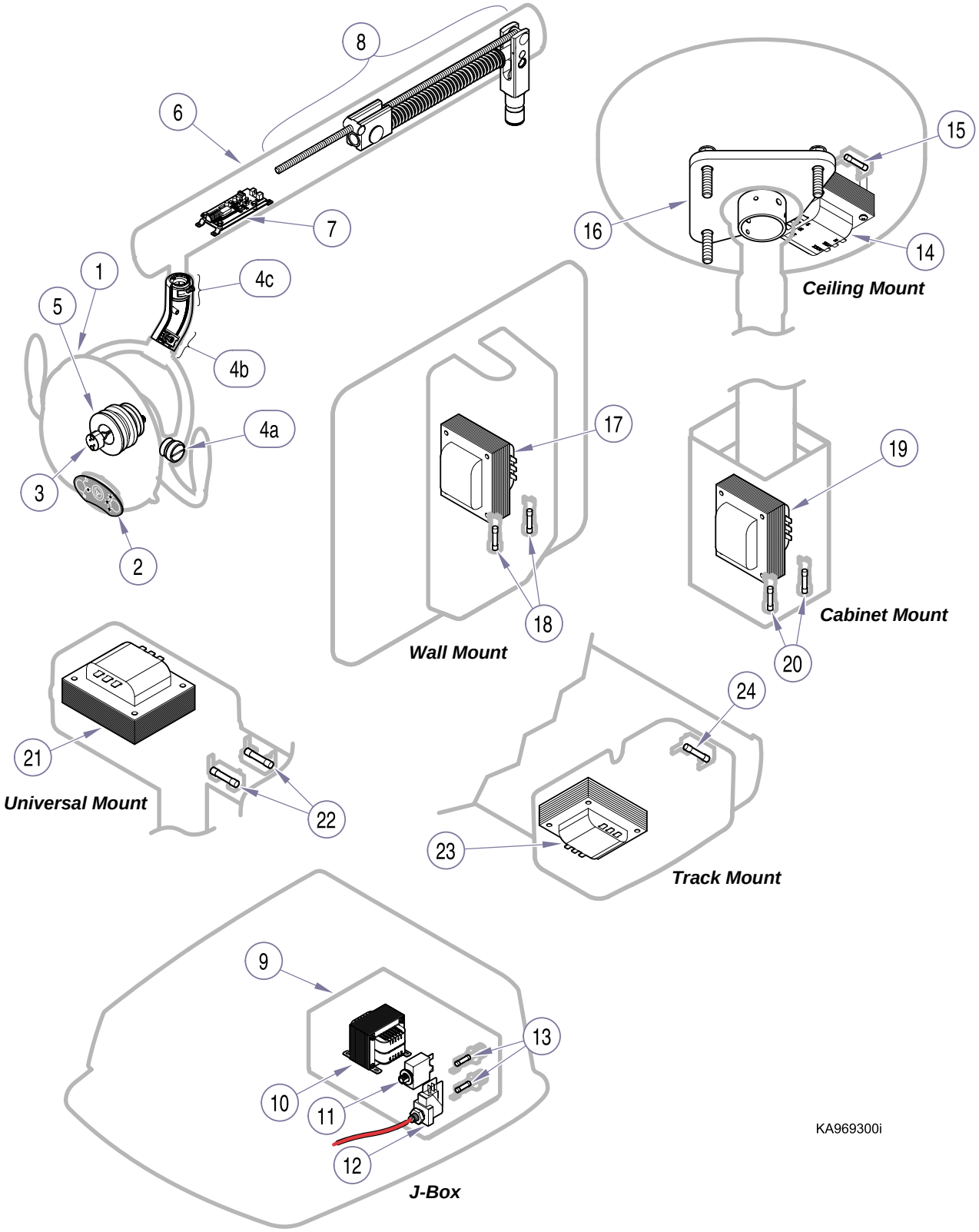

Figure 1-1. Major Components

Light Pendant Operation

The **POWER** button allows the operator to toggle between three modes; the ***STANDBY*** mode, ***ON*** mode, and ***AUTO ON*** mode. Each time the operator presses the **POWER** button, a signal is sent to light control board incrementing its Power setting to the next mode.

The **INTENSITY** button allows the operator to toggle between three modes; ***low intensity*** mode, ***medium intensity*** mode, and ***high intensity*** mode. When in ***ON*** or ***AUTO ON*** power mode, the light control board is in one of three light intensity modes. When the operator presses the **INTENSITY** button, a signal is sent to light control board incrementing its Intensity setting to the next mode.

The **COMPOSITE** button allows the operator to toggle between ***normal*** and ***composite*** mode. NOTE: The **INTENSITY** button only works in ***normal*** mode. When in ***ON*** or ***AUTO ON*** power mode, the light control board is also in either ***normal*** or ***composite*** light intensity mode. When the operator presses the **COMPOSITE** button, a signal is sent to light control board, incrementing its setting to the next mode.

Light Control Board Operation

When the operator toggles the **POWER** button to the ***ON*** or ***AUTO ON*** mode, a signal is sent to the light control board, activating it. The light control board then determines what mode the light **INTENSITY** button is set to and then provides the appropriate voltage output which is applied across the light bulb. The voltage output for ***low intensity*** mode is 12.8 VAC, output for ***medium intensity*** mode is 14.4 VAC, and output for ***high intensity*** mode is 15.7 VAC. The light control board adjusts the output voltage when a button is pressed. The control system can accommodate a wide range of input voltages, yet still achieve the correct output voltage for the currently selected light intensity mode. So, even if the light control board is not seeing an ideal input voltage, it will still generate the correct output voltage for the selected intensity mode.

When the operator toggles the **COMPOSITE** button to the ***composite*** mode, a signal is sent to the light control board. The light control board then provides a voltage output of 9.8 VAC which is applied across the light bulb.

When the light control board is in ***AUTO ON*** mode, the light functions the same as in ***ON*** mode with one exception; the light is **ON** only when the flex arm is positioned below the horizontal plane. The light control board has a photo receptor switch mounted on it; it is mounted to a stationary portion of the flex arm. The flex arm also has a trigger mounted to a moving portion of the flex arm. When the operator moves the flex arm above the horizontal plane, the trigger moves away from the photo receptor, no longer breaking the receptor beam. This signals the light control board to stop voltage output to the light bulb. When the operator moves the flex arm below the horizontal plane, the trigger breaks the beam of the photo receptor, signaling the light control board to provide voltage output to the light bulb.

1.4 Standard Torque Specifications

The following standard torque specifications in Table 1-1 apply to the hardware used on the unit unless otherwise listed elsewhere in the service procedures or parts illustrations.

Table 1-1. Torque Specifications

Hardware Size*	Torque Values
#6	11 to 21 inch-lbs. (1.2 to 2.3 N•M)
#8	20 to 30 inch-lbs. (2.2 to 3.3 N•M)
#10	32 to 42 inch-lbs. (3.6 to 4.8 N•M)
1/4 inch	75 to 85 inch-lbs. (8.5 to 9.6 N•M)
5/16 inch	18 to 22 ft.-lbs. (24.4 to 29.8 N•M)
3/8 inch	31 to 35 ft.-lbs. (42.0 to 47.5 N•M)
1/2 inch	50 to 60 ft.-lbs. (67.8 to 81.4 N•M)

*** All hardware should be grade 5 or above.**

1.5 Specifications

Factual data for the dental light is provided in Table 1-2. Also, see Figure 1-3, Sheets 1 thru 6. for Dimensions and Range of Motion information.

Table 1-2. Specifications

Description	Data
Weight of a Unit:	
Chair Mounted Console Version:	
Without Shipping Carton	26 lbs (11.8 kg)
With Shipping Carton	31 lbs (14.0 kg)
Chair Mounted LR Version:	
Without Shipping Carton	36 lbs (16.3 kg)
With Shipping Carton	41 lbs (18.6 kg)
Ceiling Mounted Version:	
Without Shipping Carton	47 lbs (21.3 kg)
With Shipping Carton	59 lbs (26.7 kg)
Wall Mounted Version:	
Without Shipping Carton	68 lbs (30.8 kg)
With Shipping Carton	92 lbs (41.7 kg)
Cabinet Mounted Version:	
Without Shipping Carton	48 lbs (21.8 kg)
With Shipping Carton	72 lbs (32.6 kg)

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SECTION I
GENERAL INFORMATION

Universal Mounted Version:
Without Shipping Carton..... 27 lbs (12.2 kg)
With Shipping Carton..... 42 lbs (19.0 kg)
Track Mounted Version:
Without Shipping Carton..... 55 lbs (24.9 kg)
With Shipping Carton..... 66 lbs (29.9 kg)

Electrical Requirements:
Chair Mounted LR or Console Version:
115 V - 300 Watt Power Supply.....115 VAC ±10%
3.0 Amp, 50/60 HZ
230 V - 300 Watt Power Supply.....230 VAC ± 10%
6.0 amp, 50/60 HZ
Ceiling, Track, Wall, Cabinet, and Universal Mounted Versions:.....115 /230 VAC +/-10%,
1.2 / 0.6 amp, 50/60 HZ,
Single Phase

Line Fuses for 300W Universal Power Supply.....4A, 250 VAC
5 x 20 mm, Type T (Time Delay)

Line Fuse for all other models (transformer only) ..... Type 3AG, 1.5A, 250 VAC
1/4 x 1-1/4 in., Type T (Time Delay)

Bulb Type ..... 24 VAC, 150W, G 6.35 size,
2 pin prefocused, C-6 Oval filament,
Halogen Phot Optic Lamp

Color Temperature .....5000^{o}K +/- 500^{o}K

Light Intensity:
Low Setting.....1700 foot candles (18,299 LUX)
Medium Setting.....2500 foot candles (26,910 LUX)
High Setting .....3300 foot candles (35,521 LUX
Composite Setting .....700 foot candles (7,535 LUX)

Classifications.....Class 1, Type B Applied Part,
Ordinary Equipment,
Intermittent Operation

Certifications:
Midmark Corporation.....ISO-9001

Complies to the applicable requirements of:..... UL-2601-1,
CAN/CSA-C22.2 #601.1-M90
MDD 93/42/EEC, Annex VII
[EN60601-1, EN60601-1-2]

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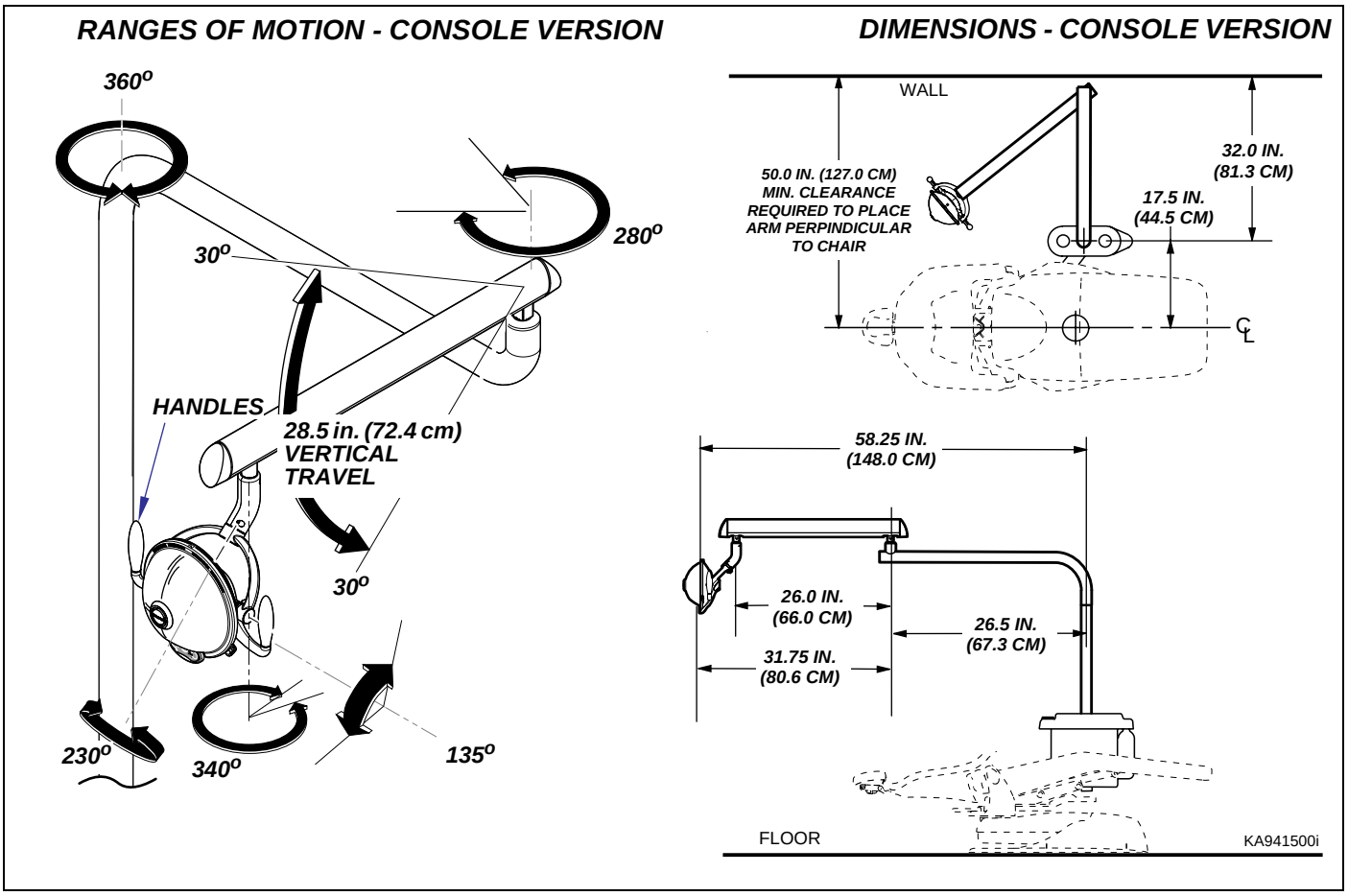

Figure 1-3 (Sheet 1 of 6). Specifications - Chair Console Mounted Light

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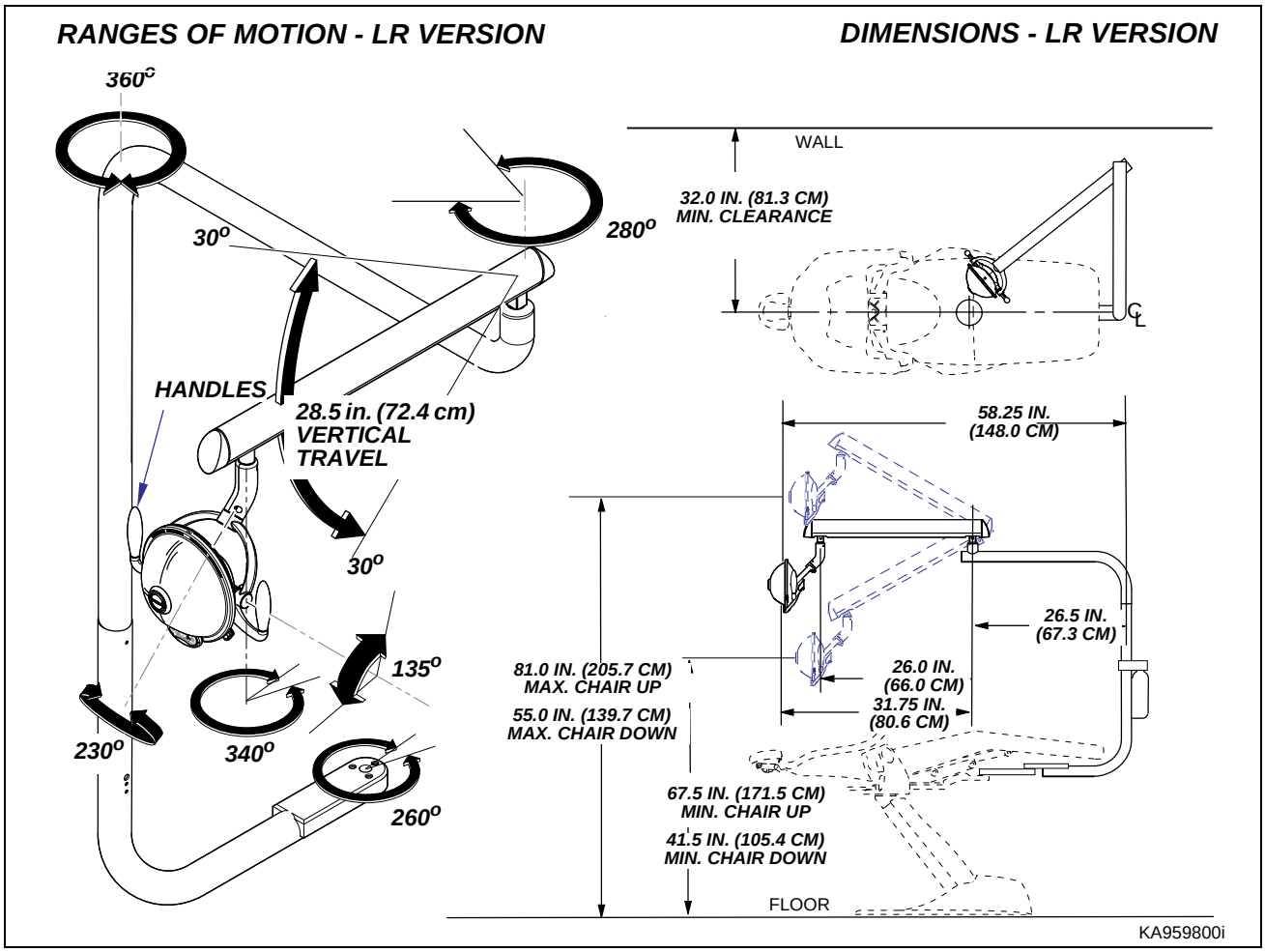

Figure 1-3 (Sheet 2 of 6). Specifications - Chair LR Mounted Light

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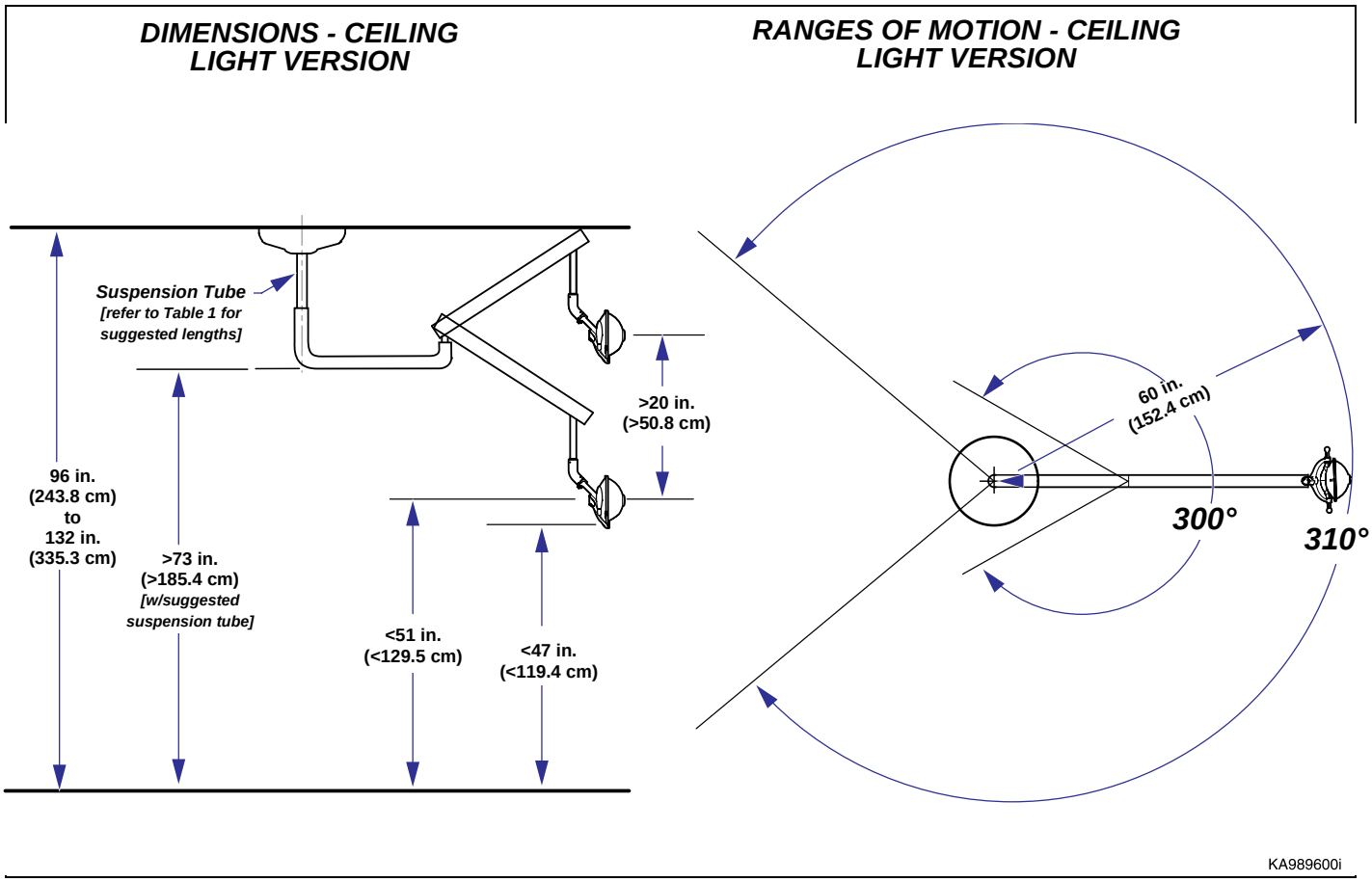

Figure 1-3 (Sheet 3 of 6). Specifications - Ceiling Mounted Light

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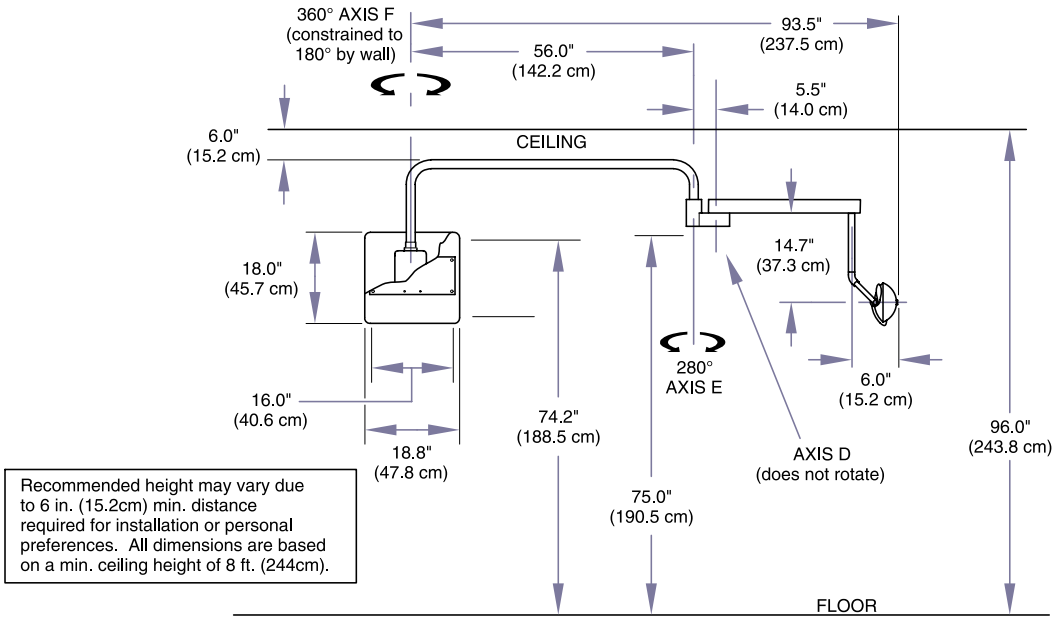
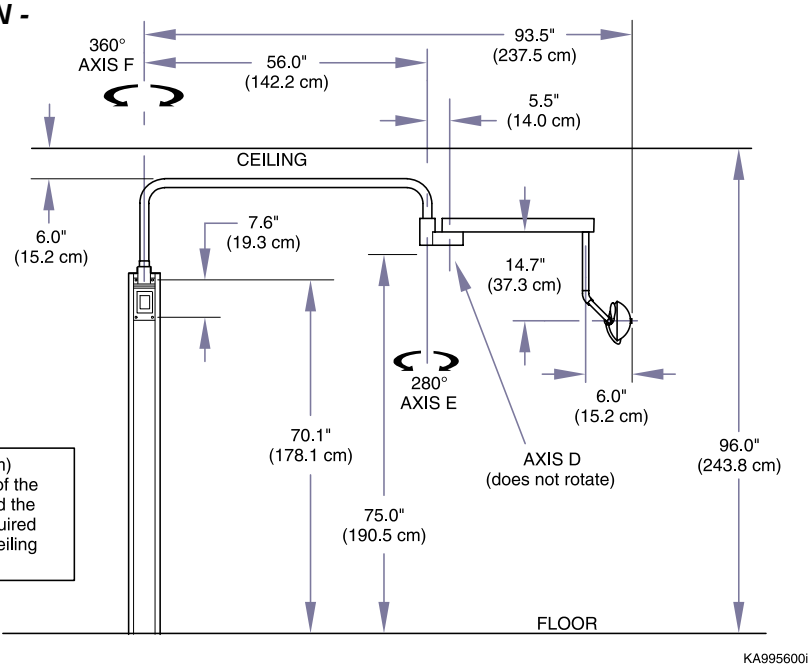
DIMENSIONS / RANGES OF MOTION - WALL LIGHT VERSION



Recommended height may vary due to 6 in. (15.2cm) min. distance required for installation or personal preferences. All dimensions are based on a min. ceiling height of 8 ft. (244cm).

DIMENSIONS / RANGES OF MOTION - CABINET LIGHT VERSION



Recommended min. 8 ft. (244cm) ceiling height due to the height of the central free standing cabinet and the 6 in. (15.2cm) min. distance required between the light arm and the ceiling for installation.

Figure 1-3 (Sheet 4 of 6). Specifications - Wall / Cabinet Mounted Light

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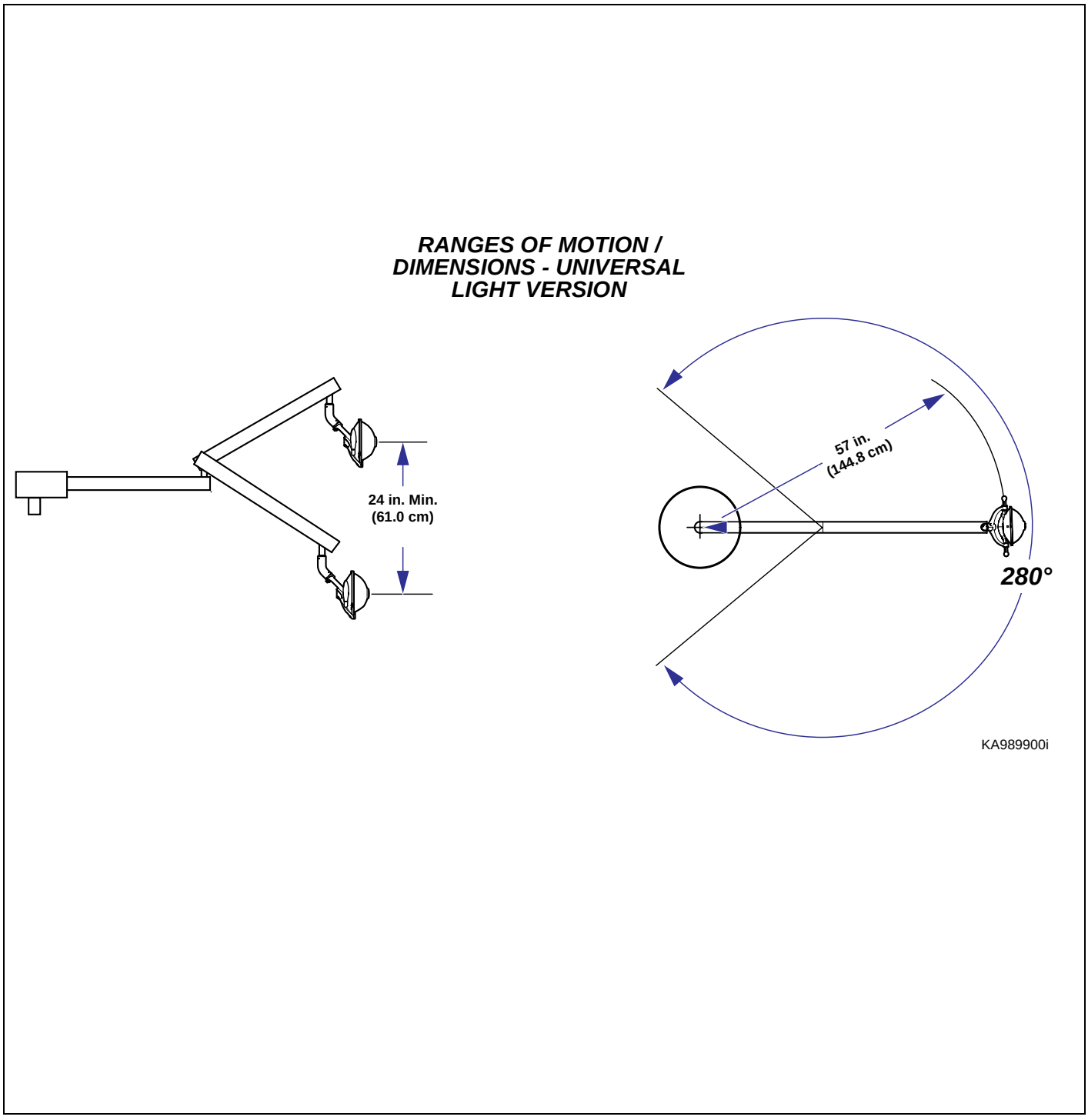

Figure 1-3 (Sheet 5 of 6). Specifications - Universal Mounted Light

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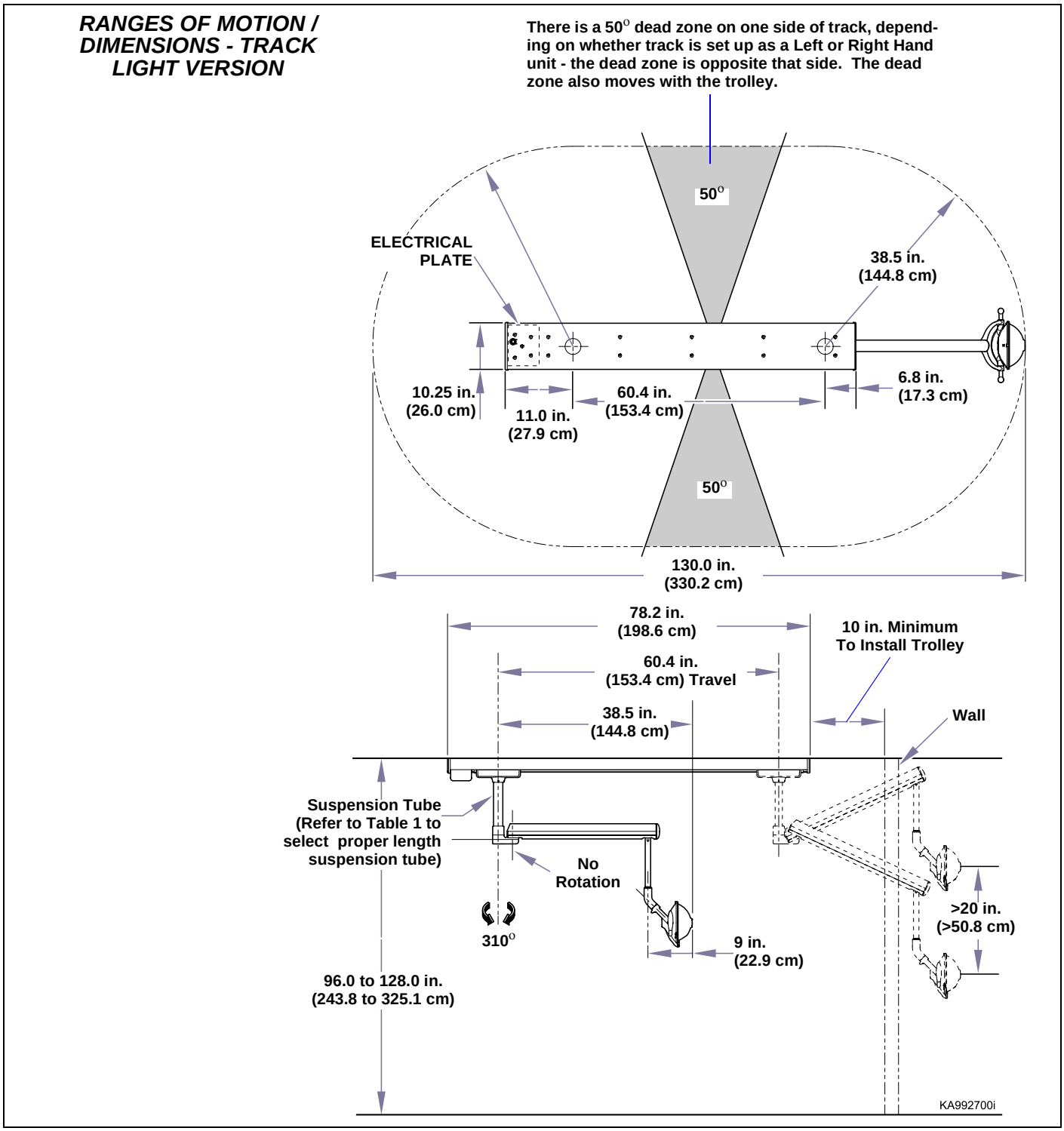
RANGES OF MOTION / DIMENSIONS - TRACK LIGHT VERSION
There is a 50° dead zone on one side of track, depending on whether track is set up as a Left or Right Hand unit - the dead zone is opposite that side. The dead zone also moves with the trolley.
50°
ELECTRICAL PLATE
38.5 in. (144.8 cm)
10.25 in. (26.0 cm)
11.0 in. (27.9 cm)
60.4 in. (153.4 cm)
6.8 in. (17.3 cm)
50°
130.0 in. (330.2 cm)
78.2 in. (198.6 cm)
10 in. Minimum To Install Trolley
60.4 in. (153.4 cm) Travel
38.5 in. (144.8 cm)
Wall
Suspension Tube (Refer to Table 1 to select proper length suspension tube)
No Rotation
310°
>20 in. (>50.8 cm)
9 in. (22.9 cm)
96.0 to 128.0 in. (243.8 to 325.1 cm)
KA992700i

Figure 1-3 (Sheet 6 of 6). Specifications - Track Mounted Light

1.6 Parts Replacement Ordering

If replacement part(s) are required, order part(s) directly from factory as follows:

(1) Refer to Figure 1-4 to determine location of model number and serial number of light and record this data.

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(2) Refer to Parts List to determine item numbers of parts, part numbers, descriptions, and quantities needed and record this data (Refer to para 6.1).

(3) Determine installation date of light and record this data. Call Midmark (1-800 643-6275) and ask for Technical Service Department.

NOTE
To assure expedient service and correct parts you must have correct *Model and Serial Number* of light.

Table 1-3. Special Tool List

Description of Special Tool	Manufacturer's Name / Address / Phone	Manufacturer's Part Number	Purpose of Special Tool
Multimeter *	Commercially Available	Any Type	Used to perform continuity and voltage checks.
Torque Wrench *	Commercially Available	Any Type	Used to tighten nuts or screws to specified values.
Snap Ring Pliers [capable of at least 1-3/16 in. (30.2 mm) spread]	Commercially Available	Any Type	Used to remove focus housing nut which secures reflector assembly onto reflector mount.
Carpenter's Level	Commercially Available	Any Type	Used to level the light arms to prevent drifting and maximize ease of lighthead positioning.
* *Tool should be calibrated annually to ensure proper specifications are met.*			

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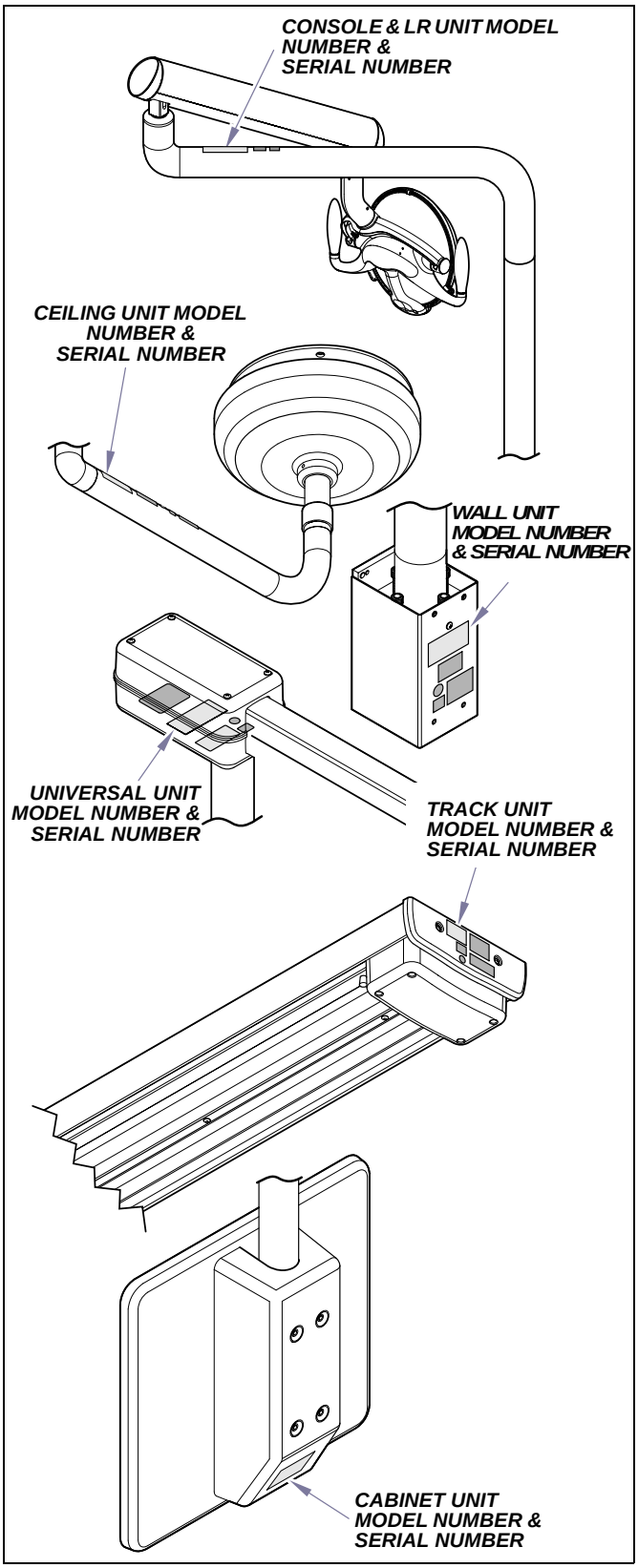
CONSOLE & LR UNIT MODEL NUMBER & SERIAL NUMBER
CEILING UNIT MODEL NUMBER & SERIAL NUMBER
WALL UNIT MODEL NUMBER & SERIAL NUMBER
UNIVERSAL UNIT MODEL NUMBER & SERIAL NUMBER
TRACK UNIT MODEL NUMBER & SERIAL NUMBER
CABINET UNIT MODEL NUMBER & SERIAL NUMBER

Figure 1-4. Model Number / Serial Number Location

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SECTION II
TESTING AND TROUBLESHOOTING

2.1 Operational Test

In order to effectively diagnose a malfunction of light, it may be necessary to perform an operational test as follows:

WARNING
Refer to the Operator's Manual for complete instructions on operating the light. Failure to do so could result in personal injury.

NOTE
The Operational Test, for the most part, only describes what ***should*** happen when light is operated. If the light does something other than described, a problem has been discovered. Refer to Troubleshooting Guide to determine cause of problem and its correction.

WARNING
When performing various checks with light plugged in and covers off use extreme care to prevent accidental electrical shock. Failure to comply could cause severe injury.

(1) If light is part of an operatory, turn **MASTER ON / OFF** switch (1, Figure 2-1) to ***ON***.

(2) **Observe.** The lighthead (2) ***should not*** illuminate.

(3) Press **POWER** button (3).

(4) **Observe.** The lighthead (2) should illuminate.

(5) Press **INTENSITY** button (4) while watching light intensity of lighthead. Wait two to three seconds and repeat. Repeat a third time.

(6) **Observe.** Each time **INTENSITY** button (4) is pressed, lighthead (2) should toggle between ***Medium*** (A), ***High*** (B), and ***Low*** (C) intensity modes. Also, associated indicator lamp (A, B, or C) should illuminate to indicate currently selected intensity mode.

The light intensity of lighthead at three intensity modes should be:
Low Setting - 1700 fc (18,299 lux)
Medium Setting - 2500 fc (26,910 lux)
High Setting - 3300 fc (35,521 lux)

(7) Press **COMPOSITE** button (5).

(8) **Observe.** The light intensity of lighthead (2) should decrease significantly. The light intensity of lighthead in ***Composite*** mode should be 700 fc (7,535 lux).

(9) Press the **COMPOSITE** button (5) again to return to standard light setting (normal mode).

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SECTION II
TESTING AND TROUBLESHOOTING

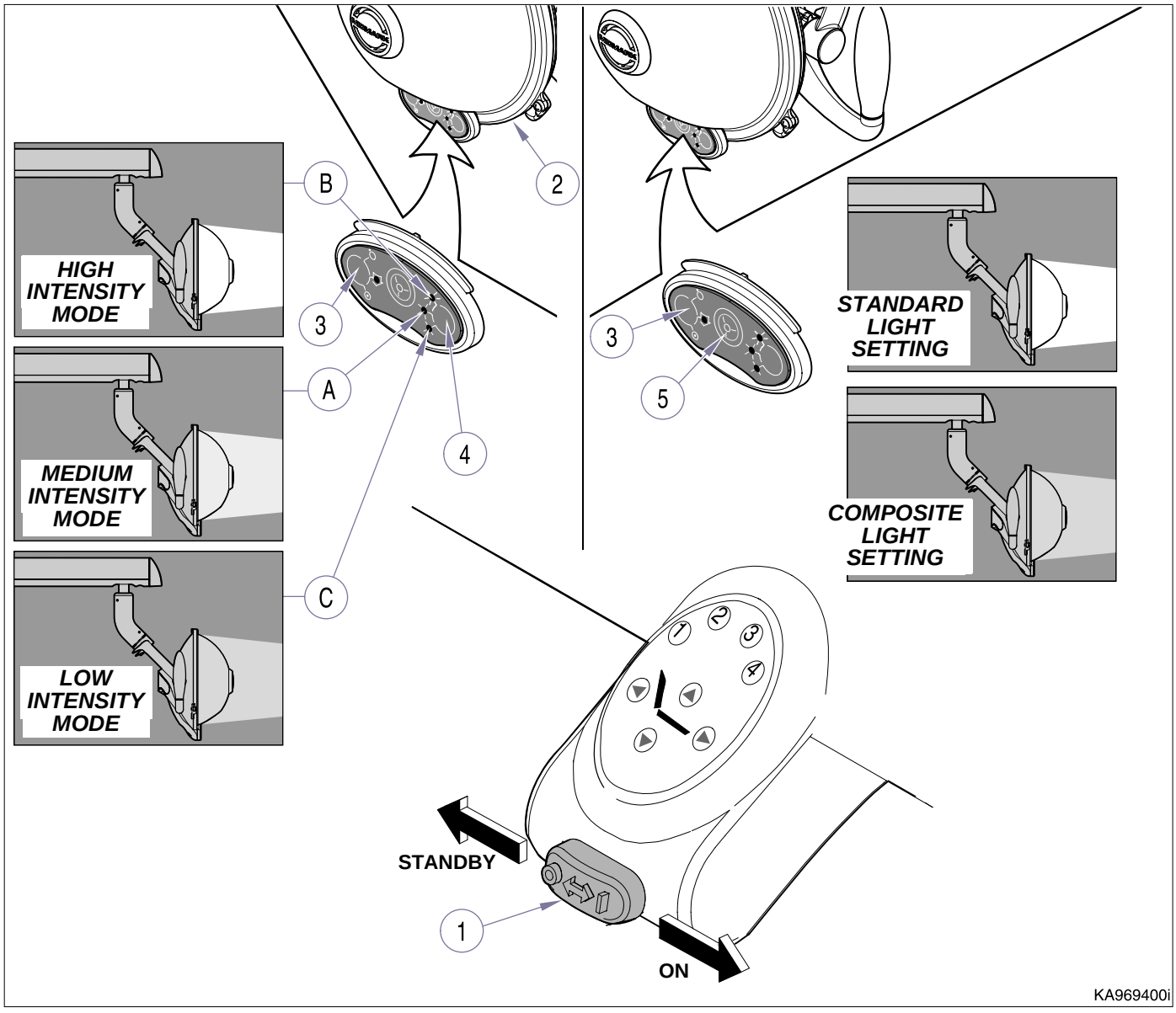

Figure 2-1.

(10) Press **POWER** button (1, Figure 2-2).

(11) **Observe.** The ***AUTO ON*** indicator lamp (2) should illuminate, indicating the light is in ***AUTO ON*** mode.

(12) Raise and lower lighthead (3) while observing.

(13) **Observe.** When flex arm (4) of light is lowered below horizontal plane (A), lighthead should automatically turn ***ON***. When flex arm (4) of light is raised above the horizontal plane (B), lighthead should automatically turn ***OFF***.

(14) Press **Power** button (1).

(15) **Observe.** The ***AUTO ON*** indicator lamp (2) should go out, indicating the light is in ***OFF*** mode. The lighthead should not be illuminating.

(16) Press **Power** button (1) to turn lighthead ***ON*** and then press **Intensity** button (5) until intensity is set to ***High*** mode (C).

NOTE
The factory suggested setting is to adjust the focus at a range of 27 in. (68.6 cm). The light comes factory adjusted at this focus range. The allowable adjustment range is 21 to 39 in. (53.3 to 99.0 cm) to allow for user preference.

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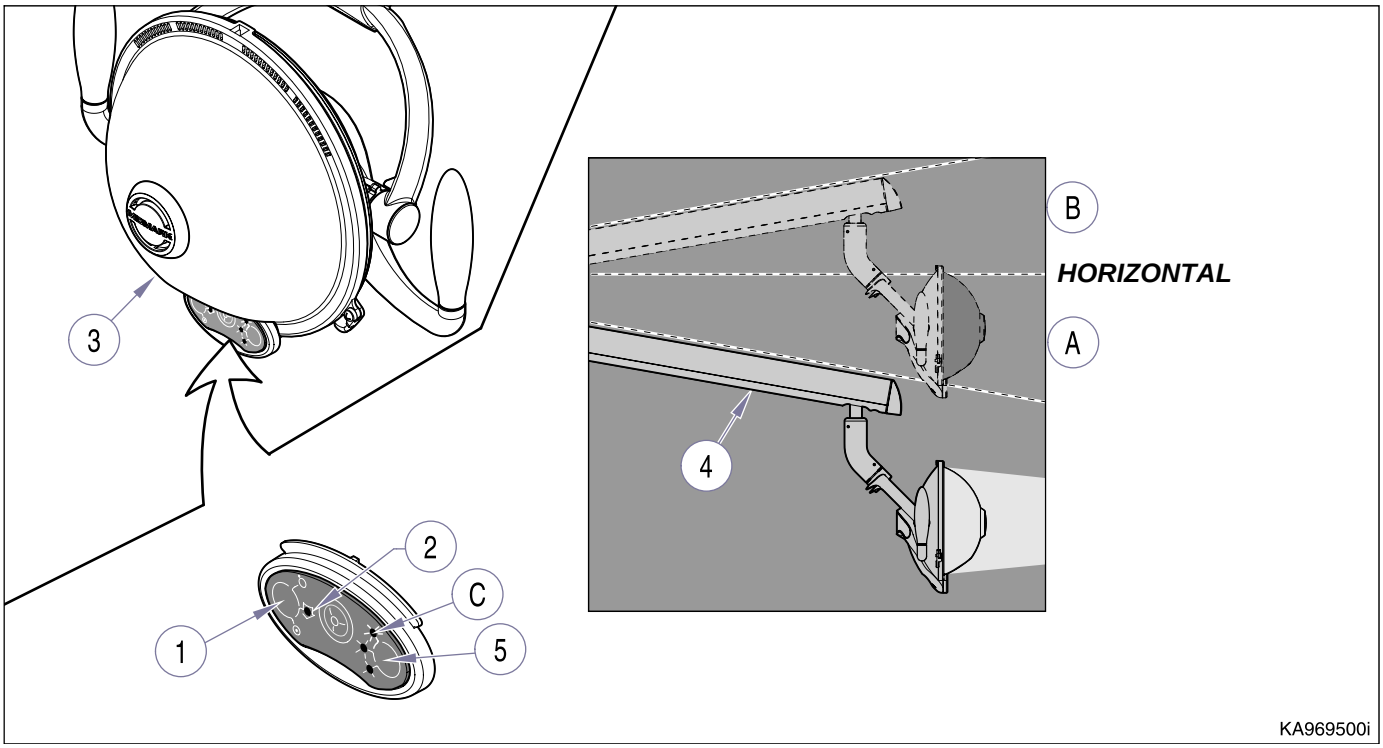

Figure 2-2.

(17) Position shield (1, Figure 2-3) of lighthead at user's desired focus range (2) [21 to 39 in. (53.3 to 90.0 cm)] from a target (3) [wall, chair, or back].

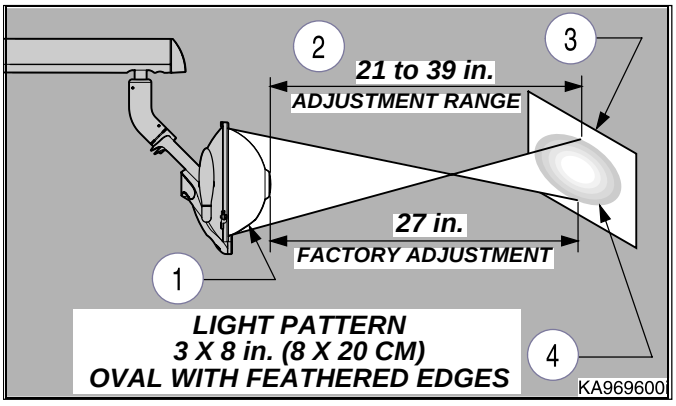

Figure 2-3.

(18) **Observe.** At user's desired focus range (2), light pattern (4) should be a 3 x 8 in. (8 x 20 cm) pattern which is oval in shape with feathered edges.

(19) If light is part of an operatory, turn **Master ON / OFF** switch (1, Figure 2-1) to ***OFF***. Then, press **Power** button (3).

(20) **Observe.** Lighthead (2) should not illuminate. Nothing should happen.

(21) Using lighthead handles, rotate lighthead, flex arm, and light arm thru their full range of motions as shown in Figure 1-3, Sheets 1 thru 6). Then, move, release, and observe lighthead at various positions in its range of motion.

(22) **Observe.** The lighthead and arms should be able to be positioned easily through their entire range of motion, without using excessive force. When released, lighthead or arms should not drift down or sideways on their own.

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SECTION II
TESTING AND TROUBLESHOOTING

2.2 Troubleshooting Procedures

Table 2-1 is a Troubleshooting Guide which is used to determine causes of malfunctions. Refer to Figures 5-1 thru 5-6 as necessary to assist in troubleshooting electrical circuits.

WARNING
Use extreme caution when testing components with light that is plugged into universal power supply. Line voltage (115 VAC) is present. Failure to comply could result in personal injury.

Problem	Symptom	Probable Cause	Check	Correction
Lighthead will not operate when any function is selected.	When any button on the light control pendant is pressed, indicator lamps work, but lighthead does not illuminate.	Light is in AUTO ON mode and flex arm is positioned above horizontal plane.	Check if flex arm of lighthead is positioned above horizontal plane.	Lower flex arm of lighthead below horizontal plane. Inform operator that in AUTO ON mode, flex arm must be below horizontal plane before lighthead will illuminate.
		Wiring is torn, broken, or disconnected between the light control board to the bulb socket.	Perform a continuity check on wires running from light control board [in flex arm] to bulb socket in lighthead.	Replace or repair any torn, broken, or disconnected wiring / terminals.
		Bulb is burned out or has not been installed.	Replace suspect bulb with known working bulb.	Replace bulb. Refer to para 4.3.
	[Applies only to light units powered thru a J-Box- i.e, chair mounted LR & Console light] When any button on the light control pendant is pressed, nothing happens (indicator lamps do not work and lighthead will not illuminate).	Loss of air pressure to pressure switch [*in universal power supply, pressure switch is typically located in junction box*].	Check if delivery head Master ON / OFF switch [*on delivery head*] is ON.	Turn Master ON/ OFF switch to ON. If still no air pressure, refer to troubleshooting guide in ProCenter Delivery Unit Service and Parts Manual.
		Facility circuit breaker providing power to unit is tripped.	Check to see if facility circuit breaker for unit is tripped.	If facility circuit breaker is tripped, determine what caused the circuit breaker to trip, correct the problem, and then reset / replace circuit breaker.
		Universal power supply power cord is unplugged from outlet receptacle [*typically in junction box*].	Check to see if universal power supply power cord is plugged into outlet receptacle.	Plug universal power supply power cord into outlet receptacle.
		Line fuse(s) for universal power supply [*typically in junction box*] is blown.	Perform continuity check on line fuse(s).	Replace any blown line fuses. Refer to para 4.21.
		N.O. pressure switch is malfunctioning [*in universal power supply typically located in junction box*].	Perform continuity check on pressure switch. With Master ON / OFF switch in ON position, there should be continuity between N.O. and COM. terminals of pressure switch.	Replace pressure switch. Refer to para 4.16.

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SECTION II
TESTING AND TROUBLESHOOTING

Problem	Symptom	Probable Cause	Check	Correction
		Transformer is malfunctioning [*in universal power supply typically located in junction box*].	With transformer unloaded (unplug light harness from universal power supply), check for 19.4 +/- 2.0 VAC across secondary output leads of transformer when the Master ON / OFF switch is ON. See Figure 5-1 or 5-2 for this check.	If correct voltage is not present, replace transformer. Refer to para 4.7.
		Light control board is malfunctioning.	Replace suspect light control board with known working light control board or check for proper output voltages. Refer to Figure 5-1 or 5-2 for this check.	Replace light control board. Refer to para 4.19.
		Wiring is torn, broken, or disconnected within the light arm, flex arm, or pivot joint assemblies.	Perform a continuity check on red and black wires running from transformer to light control board [in flex arm] and then to lighthead.	Replace or repair any torn, broken, or disconnected wiring / terminals.
		Power button membrane on light control pendant [*on lighthead*] is malfunctioning.	Perform continuity check between terminals 1 and 6 of light control pendant while pressing power button; there should be continuity between terminals when Power button is depressed. See Figure 5-1 or 5-2 for this check.	Replace light control pendant. Refer to para 4.6.
		Bulb socket is corroded resulting in bad connection.	Clean bulb socket or replace suspect bulb socket with known working bulb socket.	Replace bulb socket. Refer to para 4.4.
	[Applies only to light units connected directly to facility power source-i.e, ceiling, track, wall/ cabinet, universal] When any button on the light control pendant is pressed, nothing happens (indicator lamps do not work and lighthead will not illuminate).	Facility circuit breaker providing power to unit is tripped.	Check to see if facility circuit breaker for unit is tripped.	If facility circuit breaker is tripped, determine what caused the circuit breaker to trip, correct the problem, and then reset / replace circuit breaker.
		Line fuse for transformer [*typically located inside cover on light mounting plate*] is blown.	Perform continuity check on line fuse.	Replace blown line fuse. Depending on version of light, refer to para 4.9 (ceiling), 4.11 (track), 4.13 (wall/cabinet), or 4.15 (universal).
		Transformer is malfunctioning [*typically located inside cover on light mounting plate*].	With transformer unloaded (unplug light harness from universal power supply), check for 19.4 +/- 2.0 VAC across secondary output leads of transformer. See Figure 5-3 thru 5-6 for this check.	If correct voltage is not present, replace transformer. Depending on version of light, refer to para 4.8 (ceiling), 4.10 (track), 4.12 (wall/cabinet), or 4.14 (universal).

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Problem	Symptom	Probable Cause	Check	Correction
		Light control board is malfunctioning.	Replace suspect light control board with known working light control board or check for proper output voltages. Refer to Figure 5-3 thru 5-6 for this check.	Replace light control board. Refer to para 4.19.
		Wiring is torn, broken, or disconnected within the light arm, flex arm, or pivot joint assemblies.	Perform a continuity check on red and black wires running from transformer to light control board [in flex arm] and then to lighthead.	Replace or repair any torn, broken, or disconnected wiring / terminals.
		Power button membrane on light control pendant [*on lighthead*] is malfunctioning.	Perform continuity check between terminals 1 and 6 of light control pendant while pressing power button; there should be continuity between terminals when Power button is depressed. See Figure 5-1 for this check.	Replace light control pendant. Refer to para 4.6.
		Bulb socket is corroded resulting in bad connection.	Clean bulb socket or replace suspect bulb socket with known working bulb socket.	Replace bulb socket. Refer to para 4.4.
Lighthead illuminates or flashes intermittently.	Lighthead flashes or goes out, especially when lighthead is being repositioned.	Wiring is torn, broken, or disconnected within the flex arm or pivot joint assemblies.	Perform a continuity check on red and black wires running from transformer to light control board [in flex arm] and then to lighthead.	Replace or repair any torn, broken, or disconnected wiring / terminals.
Lighthead does not operate properly.	When a function is selected on light control pendant, nothing happens (some functions work when selected on light control panel, but some do not).	A membrane switch on light control pendant is malfunctioning.	Perform continuity check on suspect membrane switch of light control pendant. Refer to Figure 5-1 thru 5-6 for this check. When **POWER** button is pressed, should be continuity between terminals 1 and 6. When **COMPOSITE** button is pressed, should be continuity between terminals 1 and 4. When **INTENSITY** button is pressed, should be continuity between terminals 1 and 2.	Replace light control pendant. Refer to para 4.6.
		Wiring is torn, broken, or disconnected from the light control board to the membrane switches on light control pendant.	Perform a continuity check on wires running from light control board to light control pendant.	Replace or repair any torn, broken, or disconnected wiring / terminals.
		Light control board is malfunctioning.	Replace suspect light control board with known working light control board or check for proper output voltages. Refer to Figure 5-1 thru 5-6 for this check.	Replace light control board. Refer to para 4.19.

Problem	Symptom	Probable Cause	Check	Correction
	AUTO ON function does not work.	Photo switch on light control board [*in flex arm*] is malfunctioning.	Check function of photo switch as follows: Ensure light control pendant is in AUTO ON mode. Remove flex arm cover; then lower flex arm below horizontal so trigger is between two posts of photo switch (set point line). Light should illuminate.	Replace light control board. Refer to para 4.19.
	Light beam pattern is not a 3 x 8 in. (8 x 20 cm) oval at desired depth.	Light beam focus needs to be adjusted.	Check for a 3 x 8 in. (8 x 20 cm) light pattern at the desired focus depth (focus depth must be between 21 to 39 in. (53.3 to 90 cm).	Adjust light beam focus. Refer to para 4.5.
	Lighthead illuminates, but not at correct intensity.	Bulb is not illuminating at correct intensity.	Replace suspect bulb with known working bulb.	Replace bulb. Refer to para 4.3.
		Facility voltage level is too low.	Check facility voltage level; should be 115 VAC +/- 11.5 VAC.	Correct problem with low facility voltage level.
		Light control board is malfunctioning.	Replace suspect light control board with known working light control board.	Replace light control board. Refer to para 4.19.
		Transformer is malfunctioning [*in universal power supply typically located in junction box* ***or*** *for units without J-Box, located inside cover on light mounting plate*].	With transformer unloaded (unplug light harness from universal power supply), check for 19.4 +/- 2.0 VAC across secondary output leads of transformer when the Master ON / OFF switch is ON. Refer to Figure 5-1 thru 5-6 for this check.	If correct voltage is not present, replace transformer. Depending on version of light, refer to para 4.7 (console & LR), para 4.9 (ceiling), 4.11 (track), 4.13 (wall/cabinet), or 4.15 (universal).
		Shield assembly is clouded (possibly from using too strong of cleaning / disinfecting solutions).	Check for cloudy shield assembly.	Clean shield assembly. If cloudy, replace shield assembly.
	Buttons on light control pendant work, but one or more indicator lamps do not illuminate.	L.E.D.(s) on light control pendant is burned out.	Replace suspect light control pendant with known working light control pendant.	Replace light control pendant. Refer to para 4.6.
	Lighthead illuminates correctly for some functions, but not for others.	A membrane switch on light control pendant is malfunctioning.	Perform continuity check on suspect switch of light control pendant.	Replace light control pendant. Refer to para 4.6.
		Light control board is malfunctioning.	Replace suspect light control board with known working light control board.	Replace light control board. Refer to para 4.19.
	[Applies only to light units powered thru a J-Box- i.e, chair mounted LR & Console light] Lighthead stays illuminated even with Master ON / OFF switch in OFF position.	N.O. pressure switch is malfunctioning [*in universal power supply typically located in junction box*].	Perform continuity check on pressure switch. With Master ON / OFF switch in OFF position, there ***should not*** be continuity between N.O. and COM. terminals of pressure switch.	Replace pressure switch. Refer to para 4.16.

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Problem	Symptom	Probable Cause	Check	Correction
AUTO ON mode is out of adjustment.	Light does not come on or turn off when desired in AUTO ON mode.	AUTO ON mode is out of adjustment.	Ensure light control pendant is in AUTO ON mode. Lower flex arm below horizontal so trigger is between two posts of photo switch (set point line). Light should illuminate.	Adjust trigger to cross set point line earlier or later as desired. Refer to para 4.20.
Arm assembly(ies) or lighthead does not rotate freely or drifts when released in desired position.	Lighthead does not rotate freely or drifts when released in desired position.	Pivot joints in lighthead need adjusted.	Check pivot joints for looseness or stiffness in joint.	Adjust lighthead pivot joint tension. Refer to para 4.23.
	Flex arm drifts downward on its own when released in desired position or requires excessive force to lower.	Spring tension in flex arm need adjusted.	Check spring tension of flex arm.	Adjust flex arm spring tension. Refer to para 4.22.
	One of pivot joints requires excessive force to rotate or will not rotate at all.	Bearing in joint is dirty, corroded, worn, or damaged.	Remove and clean bearing. Replace suspect bearing with known working bearing.	Clean dirty bearing or replace worn or damaged bearing.
	Light arms or lighthead tends to drift in one direction or area.	Light arm is not leveled properly ***(LR mounted version only)***.	Check to see if vertical arm of light is plumb.	Adjust leveling screws so vertical light arm is plumb. Refer to para 4.24.
		Light arm is not leveled properly ***(console mounted version only)***.	Check to see if vertical arm of light is plumb.	Adjust leveling screws of console mount so vertical light arm is plumb. Refer to para 4.25.
		Light arm is not leveled properly ***(ceiling mounted version only)***.	Check to see if vertical arm of light is plumb.	Plumb suspension tube. Refer to para 4.26.
		Light arm is not leveled properly ***(track mounted version only)***.	Check to see if vertical arm of light is plumb.	Loosen mounting screws; then use wood / plastic door shims to adjust track backboard until suspension tube is plumb. Tighten mounting screws.
		Light arm is not leveled properly ***(wall mounted version only)***.	Check to see if vertical arm of light is plumb.	Loosen mounting screws; then use wood / plastic door shims to adjust wall mount backer until fixed arm is plumb. Tighten mounting screws.
		Light arm is not leveled properly ***(cabinet mounted version only)***.	Check to see if vertical arm of light is plumb.	Loosen mounting screws; then use wood / plastic door shims to adjust wall mount backer until fixed arm is plumb. Tighten mounting screws.
		Light arm is not leveled properly ***(universal mounted version only)***.	Check to see if vertical arm of light is plumb.	Depending on mounting being used, adjust as necessary to get fixed light arm level. Ensure any loosened mounting screws are tightened.
	Flex arm rotates farther than it should.	Stop pin is missing allowing flex arm to rotate past stop.	Check for missing stop pin.	Install stop pin.
	Flex arm will not rotate thru its full range of motion.	Stop washer is installed in wrong orientation.	Check orientation of stop washer.	Re-orient stop washer.

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SECTION III
SCHEDULED MAINTENANCE

3.1 Scheduled Maintenance

Table 3-1 is a Scheduled Maintenance Chart which lists inspections and services that should be performed periodically on the chair. These inspections and services should be performed as often as indicated in the chart.

Interval	Inspection or Service	What to Do
Semi-annually	Obvious damage	Visually check condition of light for obvious damage such as: cracks in components, missing components, dents in components, frayed or damaged wiring, or any other visible damage which would cause light to be unsafe to operate or would compromise its performance. Repair light as necessary.
	Fasteners / hardware	Check light assembly for missing or loose fasteners / hardware. Replace any missing fasteners / hardware and tighten any loose fasteners / hardware.
	Warning and instructional decals	Check for missing or illegible decals. Replace decals as necessary.
	Lighthead assembly	Remove and clean the inside of the plastic shield and the reflector with a Quaternary disinfectant / cleaner. **CAUTION:** Use only a Quaternary disinfectant to clean the plastic shield on the lighthead assembly. Others cleaners could pit or cloud the plastic shield and reflector.
	Transformer	Check for proper voltage output across transformer secondary leads (See Figures 5-1 thru 5-6). Voltage should be 19.4 VAC +/- 2.0 VAC (unloaded). If transformer is not providing proper secondary output, replace transformer.
	Pressure switch (chair mounted lights with J-Box only)	Turn Master ON/ OFF switch on delivery head to OFF when lighthead is ON. Light should turn off within 1 to 2 seconds, indicating pressure switch is working properly. Try to turn light ON when Master ON / OFF switch is OFF. Light should not illuminate. Replace pressure switch if necessary. Refer to para 4.16.
	Light control board	Check output voltages of light control board at each setting (under a load). High setting = 15.7 VAC, Medium setting = 14.4 VAC, Low setting = 12.8 VAC, and Composite setting = 9.8 VAC [+/-1.0 VAC].
	Light control pendant	Check light control pendant for proper function. Ensure all membrane switches are operating properly. Replace light control pendant if necessary. Refer to para 4.6.
	Wiring / wiring connections	Move each axis of light assembly thru its full range of motion while observing the light beam for intermittent flickering or light beam going out completely. Repair wiring or wiring connections as necessary.
	Vertical or horizontal arm of light	Check if vertical arm of light is plumb using a level. If not, adjust light arm as necessary. Refer to para 4.25 for console mounted lights, para 4.24 for LR mounted lights, and para 4.26 for ceiling mounted lights. For track mounted lights, wall mounted lights, cabinet mounted lights, or universal mounted lights, loosen mounting hardware and use shims to level or plumb arms as necessary and then retighten hardware.
	Lighthead pivot joints	Check each lighthead pivot joint to ensure ease of movement and positioning, but that no drifting occurs after lighthead is released in a position. Adjust tension of pivot joints as necessary. Refer to para 4.23. Make sure each axis rotates as specified in Figure 1-3, Sheets 1 thru 6.
	Flex arm spring tension	Raise and lower flex arm to ensure ease of movement and positioning, but that no drifting occurrs after flex arm is released in a position. If necessary, adjust the spring tension of flex arm. Refer to para 4.22.

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SECTION III
SCHEDULED MAINTENANCE

Interval	Inspection or Service	What to Do
Semi-annually	Light arm joints	Check each light arm joint to ensure ease of movement and positioning, but that no drifting occurs after arm is released in a position. If drifting occurs, adjust light arm so it is plumb. Refer to para 4.16 or 4.17. If light arm takes excessive force to move, replace bushing or bearings as necessary.
	Operational Test	Perform an Operational Test to determine if the light is operating within its specifications. Refer to para 2.1. Replace or adjust any malfunctioning components.
	Bearing assembly	Apply a thin coat of Lubriplate (#G15000181) to lightarm bearing assembly.

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SECTION IV
MAINTENANCE / SERVICE INSTRUCTIONS

4.1 Introduction

WARNING
Refer to Operator Manual for complete instructions on operating the dental light. Failure to do so could result in personal injury.

NOTE
Perform an operational test on the dental light after repair is completed to confirm repair was properly made and that all malfunctions were repaired.

The following paragraphs contain removal, installation, repair, and adjustment procedures for the dental light.

4.2 Junction Box Access

A. Removal

(1) ***To access styled junction box***, simply remove junction box cover (1, Figure 4-1) from base (2) by lifting straight up.
To access square junction box, loosen four thumbscrews (A) and lift junction box cover (B) from base (C).

B. Installation

(1) ***On styled junction box***, simply install junction box cover (1) on base (2).
On square junction box, install junction box cover (B) on base (C) and secure by tightening four thumbscrews (A).

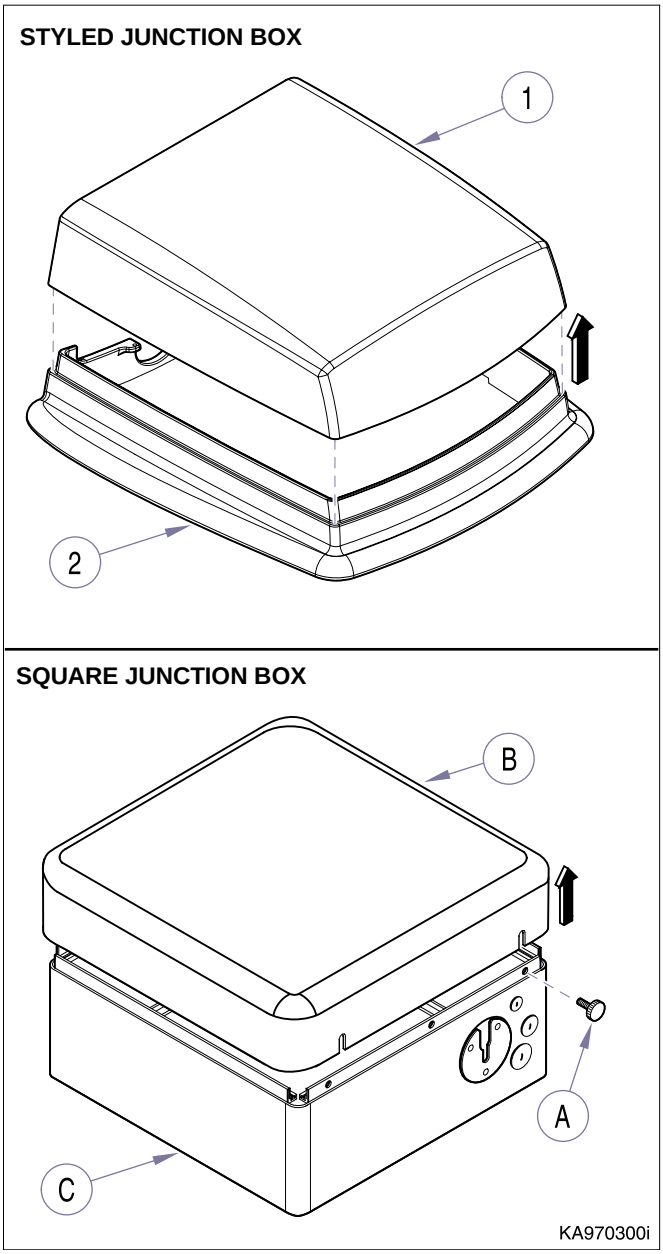

Figure 4-1. Junction Box Access

4.3 Light Bulb Removal / Installation

A. Removal

CAUTION
The bulb operates at extremely high temperatures; the bulb may be hot! Allow bulb to cool for 5 minutes before removing. Failure to do so may result in burns to the hands. Also, move the lighthead away from the patient before attempting this procedure. Failure to do so could result in burns to, or contamination of the patient.

(1) Turn lighthead off and allow bulb (1, Figure 4-2) to cool for at least 5 minutes.

(2) Rotate two release levers (2) up 1/4 turn (one located on each side of lighthead) and then remove plastic shield (3) from lighthead (4).

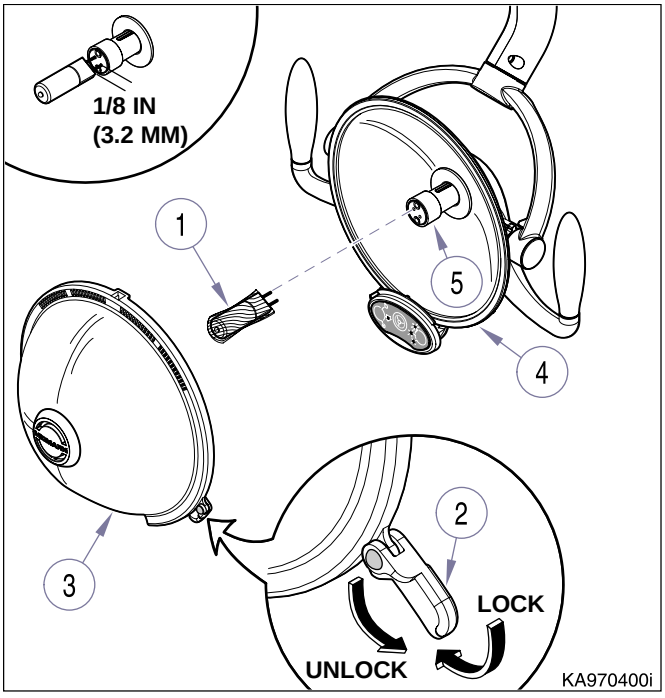

Figure 4-2. Light Bulb Removal / Installation

(3) Remove bulb (1) by pulling bulb straight out of lamp socket (5). Discard used bulb.

B. Installation

EQUIPMENT ALERT
Install new bulb without removing its protective plastic cover. Do not touch bulb with bare hands; these bulbs are sensitive to body oils, which can create hot spots on the bulb glass, reducing the bulb life. If glass portion of bulb is accidentally handled, wipe with a clean, soft, lint-free cloth moistened with denatured alcohol and pat dry.

(1) Using protective plastic cover that bulb is packaged in, align contact pins of new bulb with socket holes and press bulb in firmly. When bulb is firmly seated, there will be approximately a 1/8 in. (3.2 mm) gap between base of bulb and bulb socket.

WARNING
Never operate light with plastic shield removed. The clear shield protects patient and doctor in case of bulb explosion. Failure to have plastic shield installed could result in injury to patient and doctor.

(2) Position plastic shield (3) on lighthead. Secure plastic shield in place by rotating two release levers (2) down 1/4 turn.

4.4 Bulb Socket Removal / Installation

A. Removal

(1) Remove light bulb (Refer to para 4.3).

(2) Unscrew handle (1, Figure 4-3) from left side of reflector mount (2).

(3) Using a thin bladed tool, pry yoke cap (3) from light yoke (4).

(4) Remove yoke wire cap (5) from light yoke (4).

(5) Remove two screws (6) and RH elbow half (7) from LH elbow half (8).

(6) Cut wires (9 and 10) as close to wire connectors (11) as possible. Discard used wire connectors (11).

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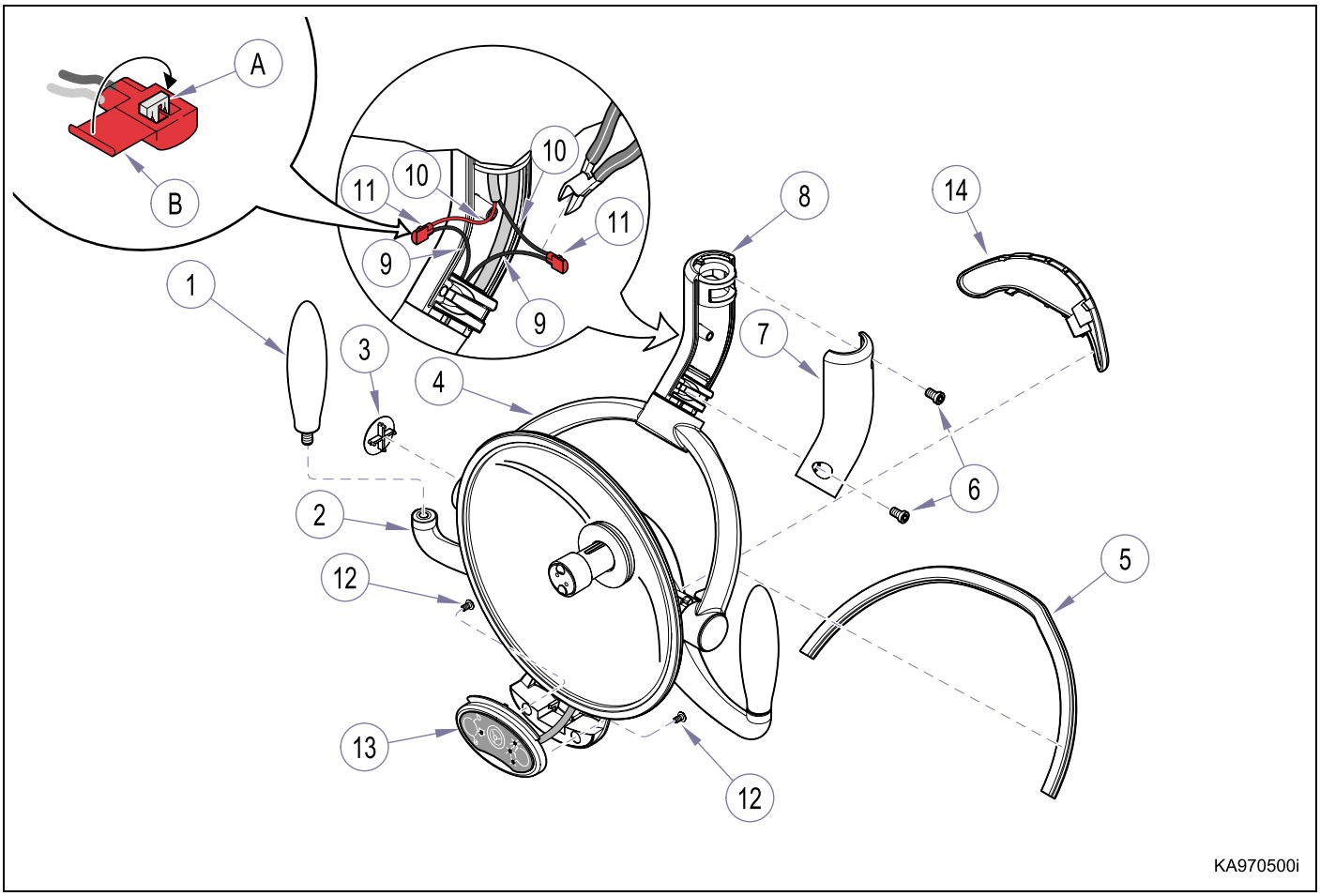

Figure 4-3. Covers Removal / Installation

(7) Remove two screws (12) and touchpad assembly (13) from reflector mount (2). Allow touchpad assembly to hang from wiring.

(8) Using a thin bladed tool, pry focus cap (14) from reflector mount (2).

NOTE
Spanner holes on focus housing nut are spaced approximately 1-3/16 in. (30.2 mm) apart. Snap ring pliers must be large enough to cover this distance.

(9) Using a snap ring pliers or similar tool, remove focus housing nut (1, Figure 4-4). See Table 1-2 for special tool.

(10) Pull reflector assembly (2) out front side of reflector mount (3) and then separate by carefully pulling two wires (4) out of reflector mount (3) and light yoke (5).

(11) Remove focus screw (6), socket housing (7), and spring (8) from reflector assembly (2).

(12) Remove two screws (9) and bulb socket (10) from socket housing (7).

B. Installation

EQUIPMENT ALERT
Do not overtighten screws or bulb socket may crack. Also, bulb socket must be installed in correct orientation or light will not focus correctly.

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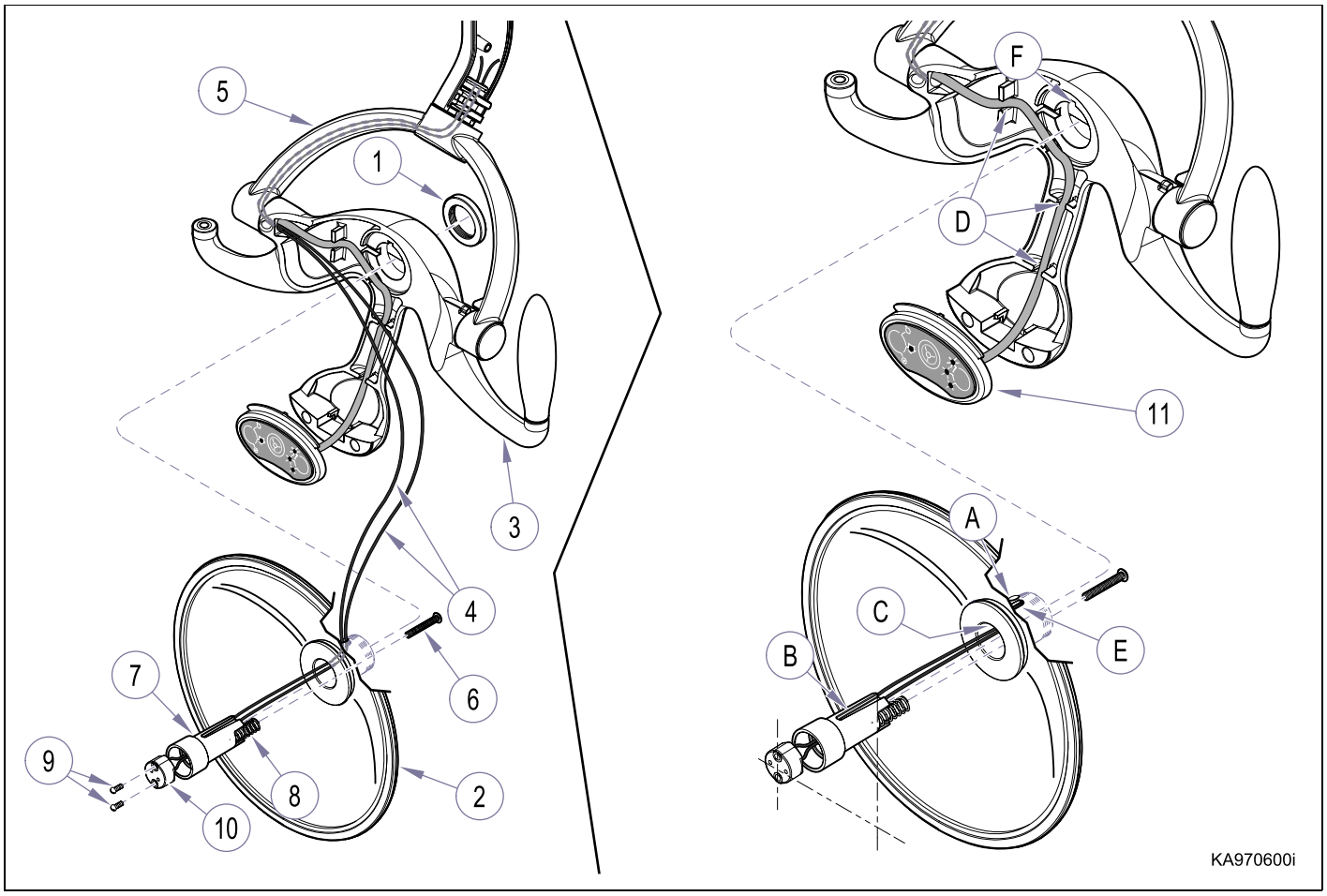

Figure 4-4. Bulb Socket Removal / Installation

(1) While threading two wires (4, Figure 4-4) thru bottom of socket housing (7), install bulb socket (10) in socket housing (7) and secure with two screws (9). Make sure bulb socket is oriented as shown in illustration.

NOTE
In following step, make sure to align slot (B) of socket housing (7) with key (C) of reflector assembly (2).

(2) Insert spring (8) and socket housing (7) into reflector assembly (2), making sure to feed two wires (4) thru wire hole (A) in reflector assembly.

(3) While pressing in on socket housing (7) to overcome spring (8) tension, install focus screw (6). Tighten focus screw fully, then back off two full turns.

NOTE
During following step, make sure to align key (E) of reflector assembly (2) with slot (F) of reflector mount (3).

(4) After feeding two wires (4) thru side of light yoke (5) and then making sure touchpad harness (11) is correctly positioned in four strain reliefs (D), install reflector assembly (2) on reflector mount (3) and secure with focus housing nut (1). Use snap ring pliers to tighten focus housing nut.

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(5) Feed two wires (9, Figure 4-3) thru light yoke (4) so they can be connected to two wires (10).

NOTE
Cut any excess length from two bulb socket (10) wires. Enough length should remain so that lighthead can pivot freely once wire connections are made.

To use wire connector, fully insert two unstripped wires into connector. Using pliers, squeeze wire spade (A) down onto two wires. Then, snap lid (B) shut to cover connections.

(6) Connect one wire (9) to one wire (10) using new wire connector (11). Repeat for remaining set of wires (9 and 10).

(7) Install RH elbow half (7) on LH elbow half (8) and secure with two screws (6). Adjust two screws while rotating lighthead around pivot joints. Lighthead should rotate thru pivot joints easily without taking excessive force. When released, joints should not drift on their own. Adjust per user's preference.

(8) Install yoke wire cap (5) on light yoke (4).

(9) Install yoke cap (3) on light yoke (4).

(10) Install touchpad assembly (13) on reflector mount (2) and secure with two screws (12).

(11) Screw handle (1) onto left side of reflector mount (2).

(12) Install light bulb (Refer to para 4.3).

(13) Adjust focus pattern (Refer to para 4.5).

(14) Install focus cap (14) on reflector mount (2).

4.5 Light Beam Focus Adjustment

A. Adjustment

NOTE
This adjustment affects the sharpness of the light pattern at a specified distance. The light's focus is factory preset for a distance of 27 in. (68.6 cm) from the front surface of the plastic shield to patient (target). However, the focus can be adjusted per user's preference for any distance between 21 to 39 in. (53.3 to 99.0 cm).

(1) Position plastic shield (1, Figure 4-5) of lighthead at any distance between 21 to 39 in. (53.3 to 99.0 cm) from a target (2) (wall, chair, or back section) and turn ***on*** light.

(2) Using a screwdriver, pry focus cap (3) off back of lighthead.

(3) Using a 1/8 in. Allen Wrench (provided), adjust focus screw (4) as necessary to achieve desired pattern. The suggested pattern is a 3 x 8 in. (8 x 20 cm) pattern, oval in shape, with feathered edges.

(4) Install focus cap (3) on back of lighthead.

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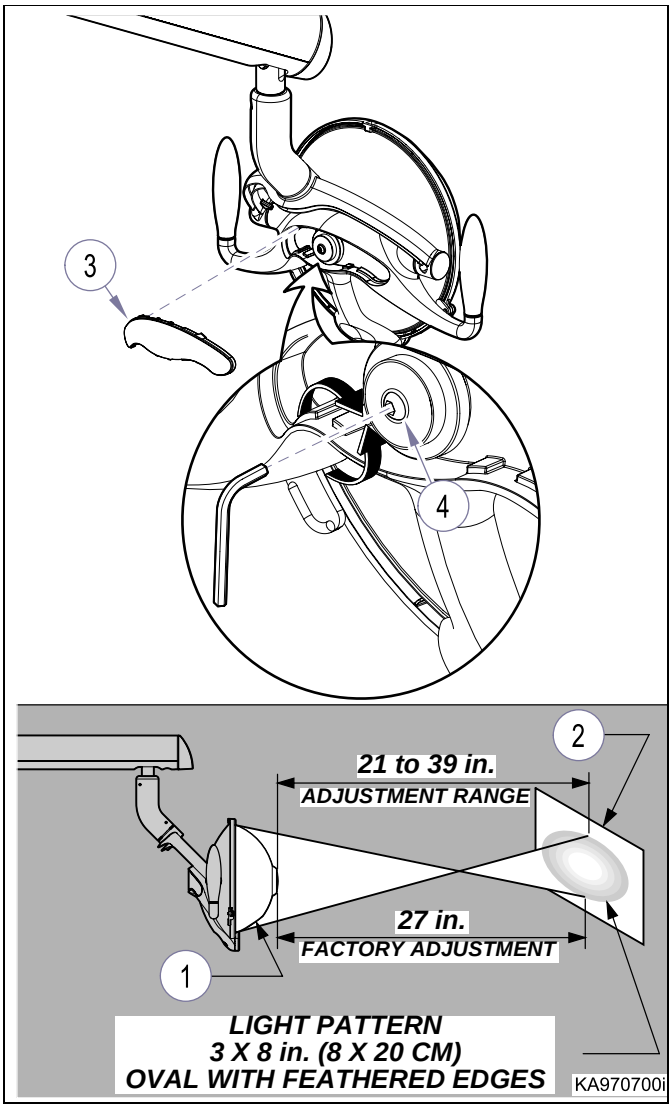

Figure 4-5. Light Beam Focus Adjustment

4.6 Light Control Pendant Removal / Installation

A. Removal

(1) Rotate two release levers (1, Figure 4-6) up 1/4 turn and then remove plastic shield (2) from reflector assembly (3).

(2) Remove two screws (4) and separate touchpad assembly (5) from lighthead.

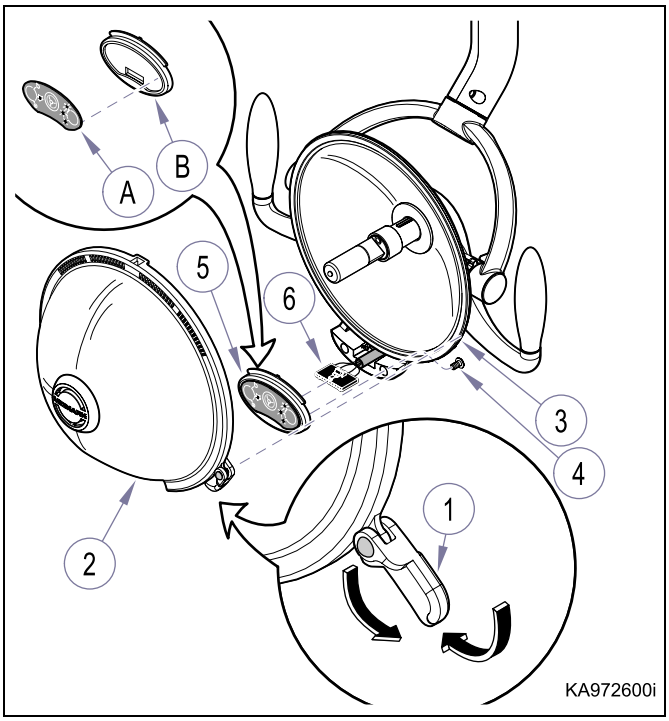

Figure 4-6. Light Control Pendant Removal / Installation

(3) Disconnect wire harness (6) from touchpad assembly (5). Discard used touchpad assembly.

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B. Installation

(1) Remove protective backing from membrane switch panel (A) and then install on control bezel (B). Press down firmly on membrane switch panel to ensure good adhesion between parts.

NOTE
When connecting wire harness, center wire harness on pins of touchpad assembly; make sure there is one unused terminal on each end of wire harness.

(2) Connect wire harness (6) to touchpad assembly (5).

(3) Install touchpad assembly (5) on lighthead and secure with two screws (4).

(4) Install plastic shield (2) on reflector assembly (3) and secure by rotating two release levers (1) down 1/4 turn.

4.7 Console & LR Light Transformer Removal / Installation (Applies to chair mounted units powered with a J-Box)

A. Removal

(1) Remove junction box cover (Refer to para 4.2).

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug power cord of universal power supply from outlet receptacle.

(3) Remove two screws (1, Figure 4-7) and power supply cover (2) from chassis (3).

NOTE
On some units, not all three wire harnesses will be connected, depending on which options were purchased.

(4) Tag and disconnect wire harnesses (4) from connectors (5).

(5) While pressing in on two locking tabs (A), push connector (5) out of chassis (3). Repeat for two remaining connectors (5).

(6) Disconnect one wire (6) from center (N.O.) terminal of pressure switch (7).

(7) Disconnect wire harness (8) and wire (9) from terminals of circuit breaker (10).

(8) Disconnect wire harness (11) from terminal of fuse housing (12).

(9) Remove four locknuts (13) and transformer assembly (14) from chassis (3).

B. Installation

(1) Install transformer assembly (14) on chassis (3) and secure with four locknuts (13).

(2) Connect wire harness (11) to terminal of fuse housing (12). If necessary, refer to Figure 5-2 for wiring diagram

(3) Connect wire harness (8) to top terminal and wire (9) to lower terminal of circuit breaker (10).

(4) Connect one wire (6) to center (N.O.) terminal of pressure switch (7).

(5) Install three connectors (5) in chassis (3) by pushing connectors into chassis until they "snap" into place.

NOTE
On some units, not all three wire harnesses will be connected, depending on which options were purchased.

(6) Connect wire harnesses (4) to connectors (5).

(7) Install power supply cover (2) on chassis (3) and secure with two screws (1).

(8) Plug power cord of universal power supply into outlet receptacle.

(9) Install junction box cover (Refer to para 4.2).

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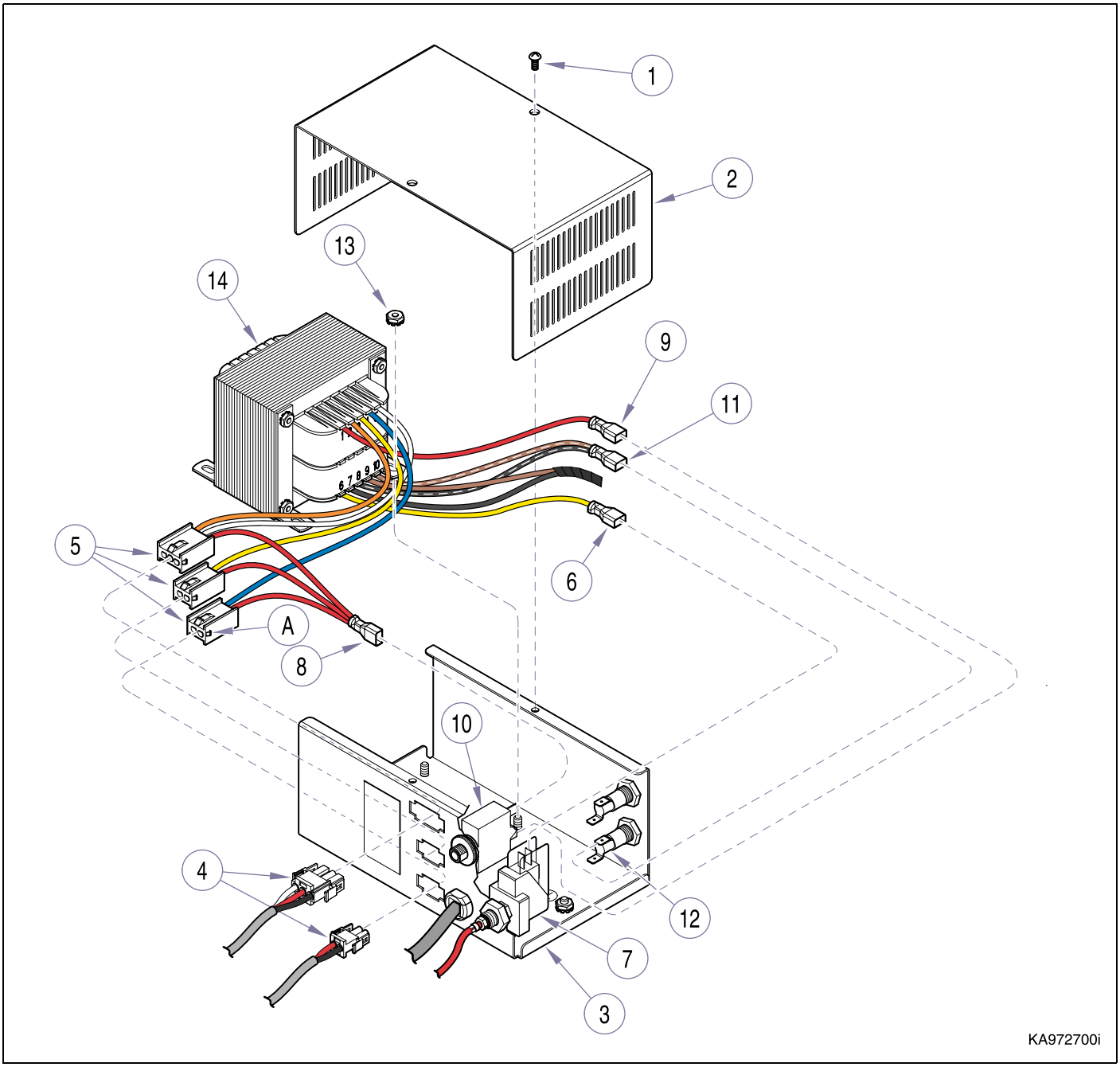

Figure 4-7. Console & LR Light Transformer Removal / Installation

4.8 Ceiling Light Transformer Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Loosen two setscrews (1, Figure 4-8) and lower ceiling cover (2) down out of way.

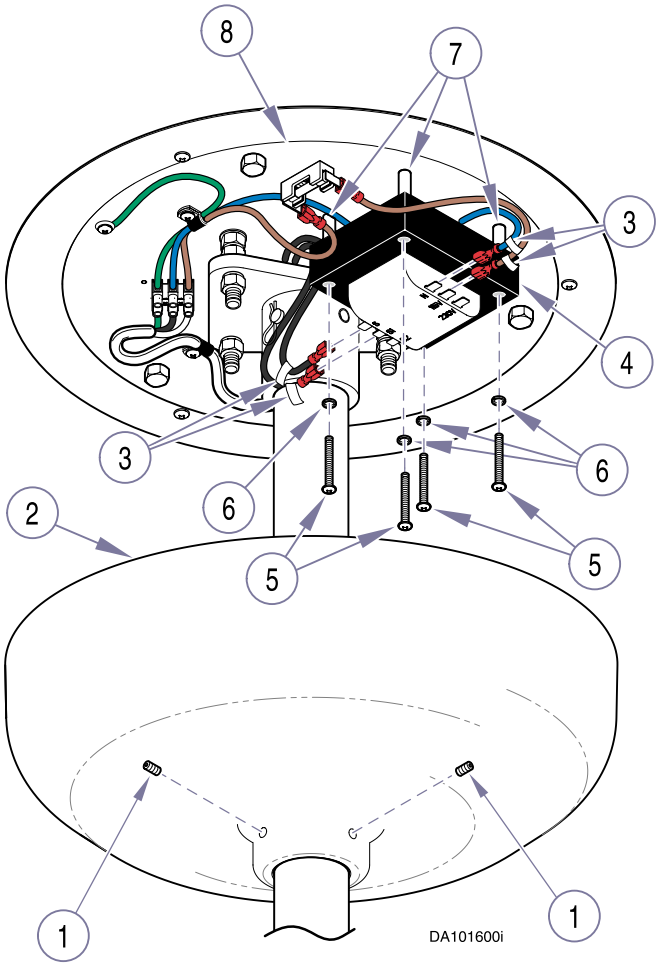

Figure 4-8. Ceiling Light Transformer Removal / Installation

(3) Tag and disconnect four wires (3) from terminals of transformer (4).

(4) Remove four screws (5), lockwashers (6), transformer (4) and rolled spacers (7) from ceiling plate (8).

B. Installation

(1) Install transformer (4) on ceiling plate (8) and secure with four rolled spacers (7), lockwashers (6), and screws (5).

(2) Connect four wires (3) to terminals of transformer (4). If necessary, refer to Figure 5-4 for wiring diagram.

(3) Position ceiling cover (2) up against ceiling and then secure in position with two setscrews (1).

(4) Turn ***ON*** facility power breaker so there is power to light unit.

4.9 Ceiling Light Fuse Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Loosen two setscrews (1, Figure 4-9) and lower ceiling cover (2) down out of way.

(3) Pull fuse (3) out of fuse holder (4).

(4) Inspect fuse (3) for any indication it has been blown. Perform continuity check on fuse. If bad, discard fuse.

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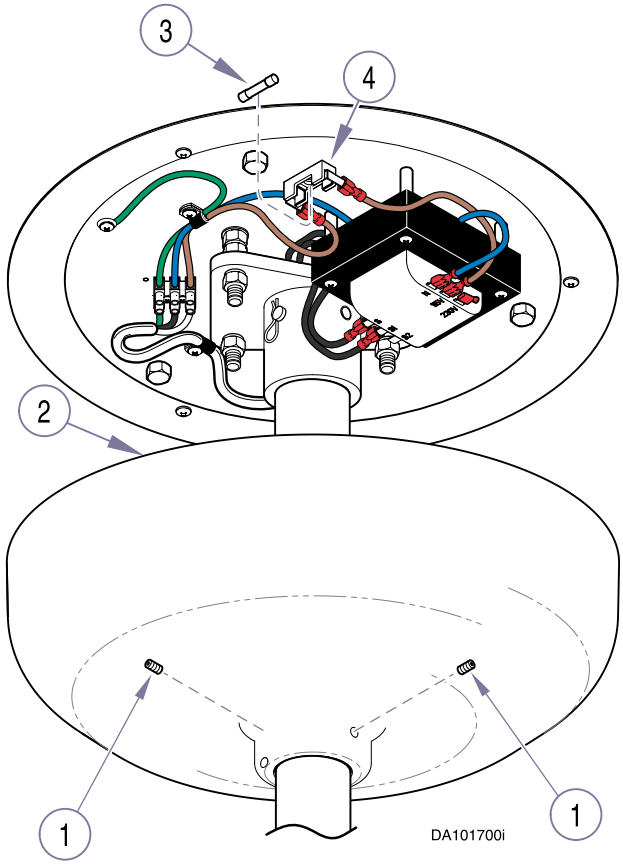

Figure 4-9. Ceiling Light Fuse Replacement

B. Installation

EQUIPMENT ALERT
Check Table 1-1. Specifications to ensure correct replacement fuse is used or refer to parts list in Section VI of this manual.

(1) Insert new fuse (3) in fuse holder (4).

(2) Position ceiling cover (2) up against ceiling and then secure in position with two setscrews (1).

(3) Turn ***ON*** facility power breaker so there is power to light unit.

4.10 Track Light Transformer Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Remove four screws (1, Figure 4-10) and transformer cover (2) from standoffs (3).

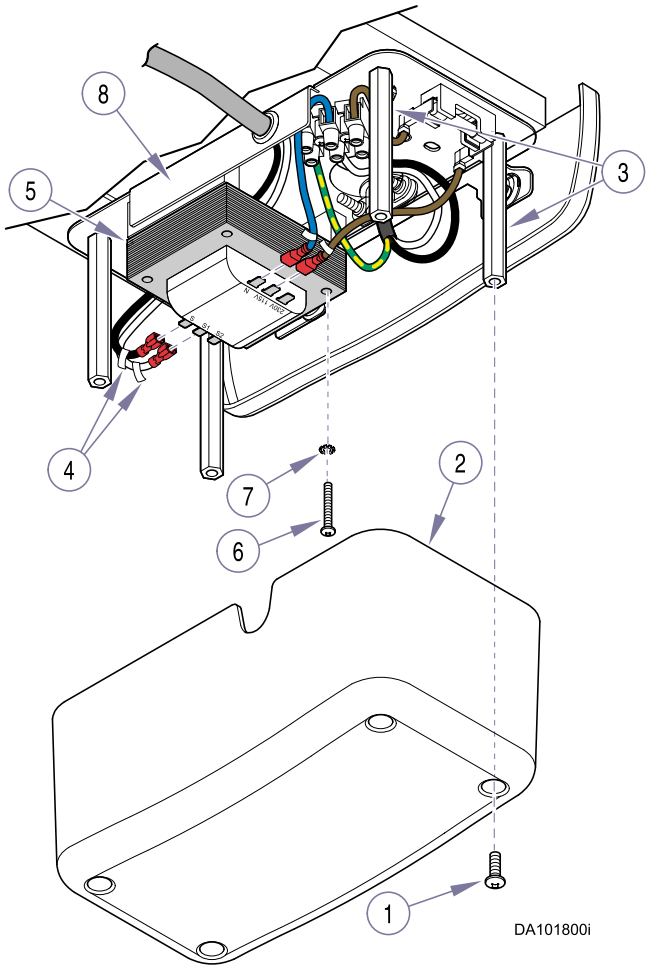

Figure 4-10. Track Light Transformer Removal / Installation

(3) Tag and disconnect four wires (4) from terminals of transformer (5).

(4) Remove four screws (6), lockwashers (7), and transformer (5) from base plate assembly (8).

B. Installation

(1) Install transformer (5) on base plate assembly (8) and secure with four lockwashers (7) and screws (6).

(2) Connect four wires (4) to terminals of transformer (5). If necessary, refer to Figure 5-5 for wiring diagram.

(3) Install transformer cover (2) on four standoffs (3) with four screws (1).

(4) Turn ***ON*** facility power breaker so there is power to light unit.

4.11 Track Light Fuse Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Remove four screws (1, Figure 4-11) and transformer cover (2) from standoffs (3).

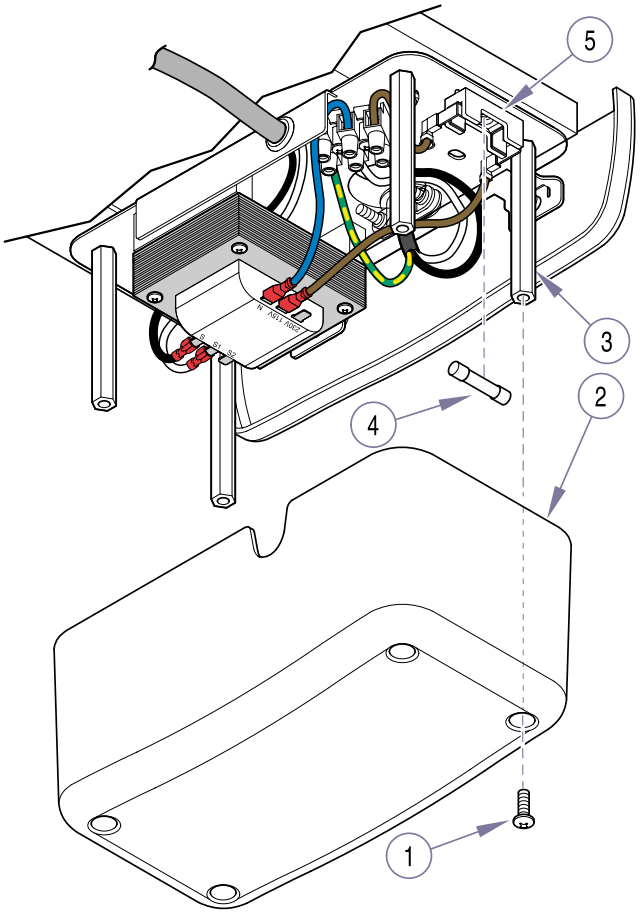

Figure 4-11. Track Light Fuse Removal / Installation DA101900i

(3) Pull fuse (4) out of fuse holder (5).

(4) Inspect fuse (4) for any indication it has been blown. Perform continuity check on fuse. If bad, discard fuse.

B. Installation

EQUIPMENT ALERT
Check Table 1-1. Specifications to ensure correct replacement fuse is used or refer to parts list in Section VI of this manual.

(1) Insert new fuse (4) in fuse holder (5).

(2) Install transformer cover (2) on standoffs (3) and secure with four screws (1).

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(3) Turn ***ON*** facility power breaker so there is power to light unit.

4.12 Wall / Cabinet Light Transformer Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) If wall unit only, remove four screws (1, Figure 4-12) and transformer cover (2) from mount assembly (3).

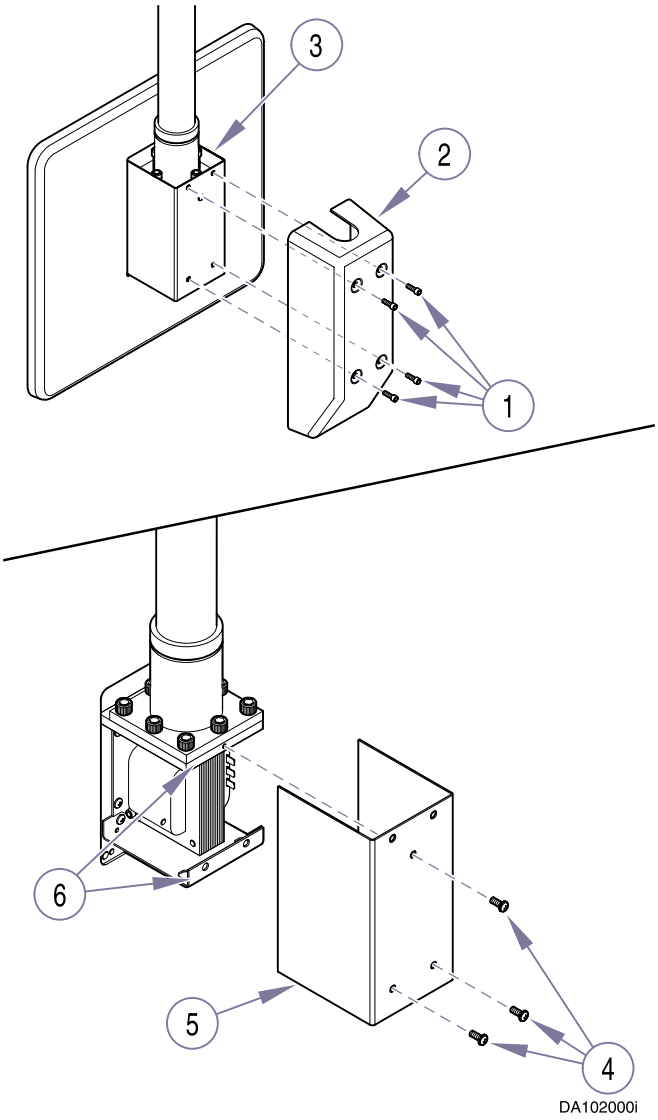

Figure 4-12. Wall / Cabinet Light Transformer Removal / Installation

(3) Remove three screws (4) and cover assembly (5) from wall mount bracket (6).

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(4) Remove four screws (1, Figure 4-13), lockwashers (2), and separate transformer assembly (3) from wall mount bracket (4).

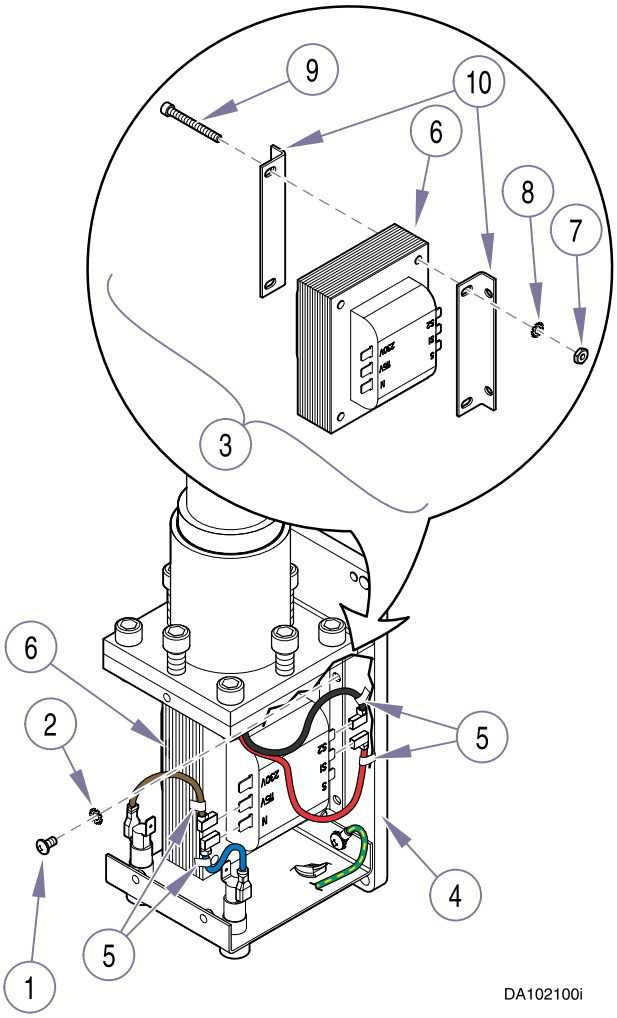

Figure 4-13. Transformer Removal / Installation

(5) Tag and disconnect four wires (5) from terminals of transformer (6).

(6) Remove two nuts (7), lockwashers (8), screws (9) and transformer brackets (10) from transformer (6).

B. Installation

(1) Install transformer brackets (10, Figure 4-13) on transformer (6) and secure with two screws (9), lockwashers (8), and nuts (7).

(2) Connect four wires (5) to terminals of transformer (6). If necessary, refer to Figure 5-6 for wiring diagram.

(3) Position transformer assembly (3) on wall mount bracket (4) and secure with four lockwashers (2) and screws (1).

(4) Install cover assembly (5, Figure 4-12) on wall mount bracket (6) and secure with three screws (4).

(5) If wall unit only, install transformer cover (2) on mount assembly (3) and secure with four screws (1).

(6) Turn ***ON*** facility power breaker so there is power to light unit.

4.13 Wall / Cabinet Light Fuse Removal / Installation

A. Removal

(1) If wall unit only, remove four screws (1, Figure 4-14) and transformer cover (2) from mount assembly (3).

(2) Simultaneously push in on fuse cap (4) with a small slotted screwdriver and rotate it 1/4 turn in the counterclockwise direction; then pull fuse cap from fuse holder (5).

(3) Pull fuse (6) out of fuse cap (4).

(4) Inspect fuse (6) for any indication it has been blown. Perform continuity check on fuse. If bad, discard fuse.

B. Installation

EQUIPMENT ALERT
Check Table 1-1. Specifications to ensure correct replacement fuse is used or refer to parts list in Section VI of this manual.

(1) Insert new fuse (6) in fuse cap (4).

(2) Simultaneously push fuse cap (4) into fuse holder (5) and rotate it 1/4 turn in clockwise direction to secure it.

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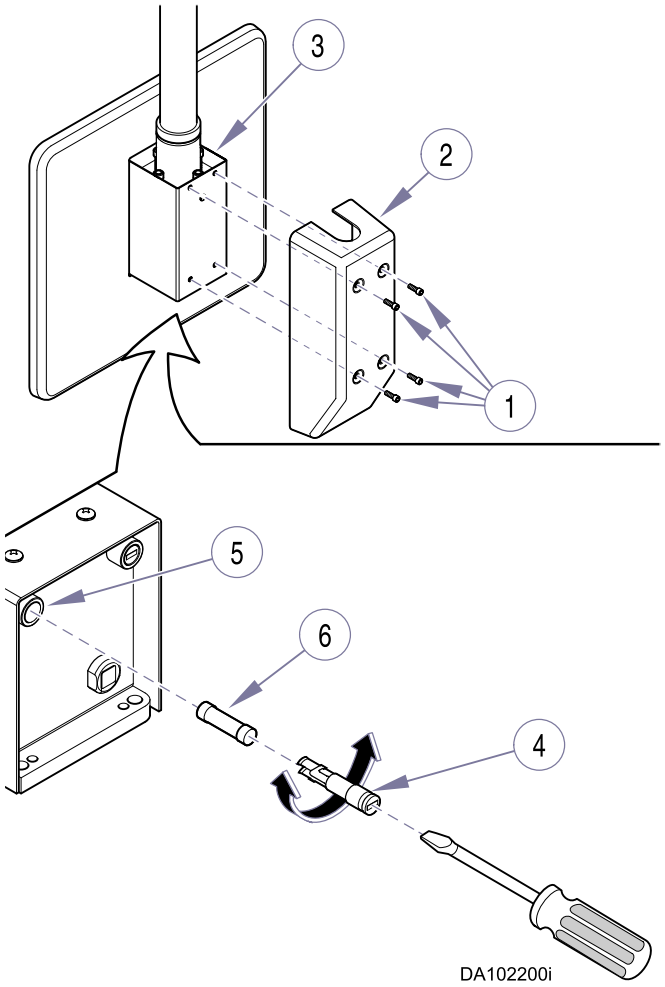

Figure 4-14. Wall Cabinet Light Fuse Removal / Installation

(3) Install transformer cover (2) on mount assembly (3) and secure with four screws (1).

4.14 Universal Light Transformer Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Remove four screws (1, Figure 4-15) and top transformer cover (2) from standoffs (3).

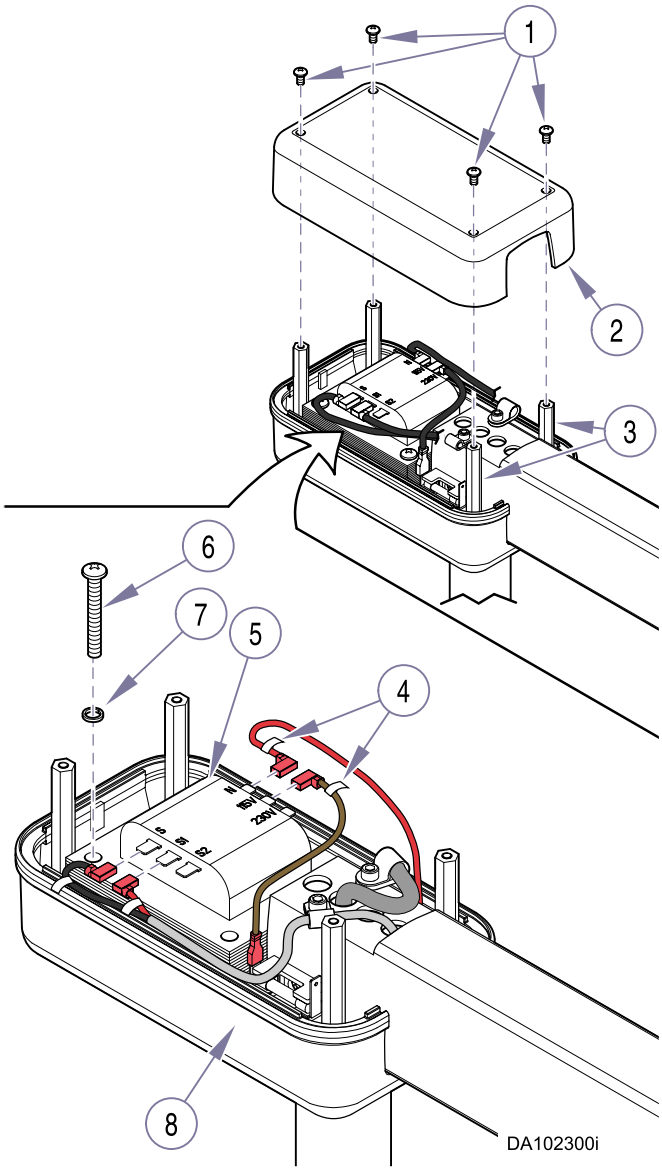

Figure 4-15. Universal Light Transformer Removal / Installation

(3) Tag and disconnect four wires (4) from terminals of transformer (5).

(4) Remove four screws (6), lockwashers (7), and transformer (5) from chassis assembly (8).

B. Installation

(1) Install transformer (5) on chassis assembly (8) and secure with four lockwashers (7) and screws (6).

(2) Connect four wires (4) to terminals of transformer (5). If necessary, refer to Figure 5-3 for wiring diagram.

(3) Install transformer cover (2) on four standoffs (3) with four screws (1).

(4) Turn ***ON*** facility power breaker so there is power to light unit.

4.15 Universal Light Fuse Removal / Installation

A. Removal

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Remove four screws (1, Figure 4-16) and top transformer cover (2) from standoffs (3).

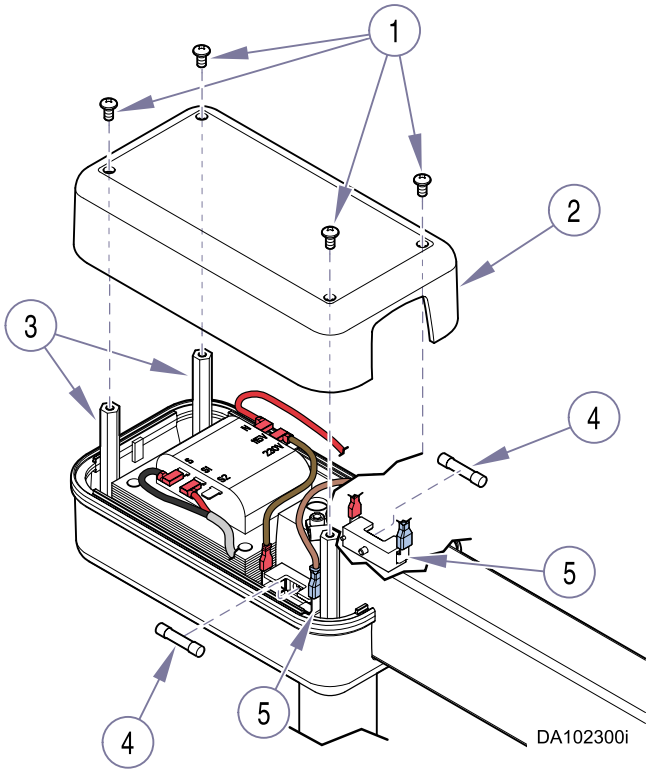

Figure 4-16. Track Light Fuse Removal / Installation

(3) Pull each fuse (4) out of each fuse holder (5).

(4) Inspect fuse (4) for any indication it has been blown. Perform continuity check on fuse. If bad, discard fuse.

B. Installation

EQUIPMENT ALERT
Check Table 1-1. Specifications to ensure correct replacement fuse is used or refer to parts list in Section VI of this manual.

(1) Insert new fuse (4) in fuse holder (5).

(2) Install top transformer cover (2) on standoffs (3) and secure with four screws (1).

(3) Turn ***ON*** facility power breaker so there is power to light unit.

4.16 Pressure Switch Removal / Installation (Applies to chair mounted units powered with a J-Box)

A. Removal

(1) Remove junction box cover (Refer to para 4.2).

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug power cord of universal power supply from outlet receptacle.

(3) Remove two screws (1, Figure 4-17) and power supply cover (2) from chassis (3).

(4) Tag and disconnect two wires (4) from terminals of pressure switch (5).

(5) Remove uni-clamp (6) and then cut tube (7) as close as possible to fitting of pressure switch (5).

(6) Remove nut (8), washer (9), and pressure switch (5) from chassis (3). ***Do not*** discard nut and washer; they will be needed for installation.

(7) Remove gasket (10) and fitting (11) from pressure switch (5).

B. Installation

(1) Install gasket (10) and fitting (11) on pressure switch (5).

(2) Install pressure switch (5) on chassis (3) and secure with washer (9) and nut (8).

(3) Slide new uni-clamp (6) onto end of tube (7); then connect tube (7) to fitting (11) and secure in place with uni-clamp.

(4) Connect two wires (4) to terminals of pressure switch (5).

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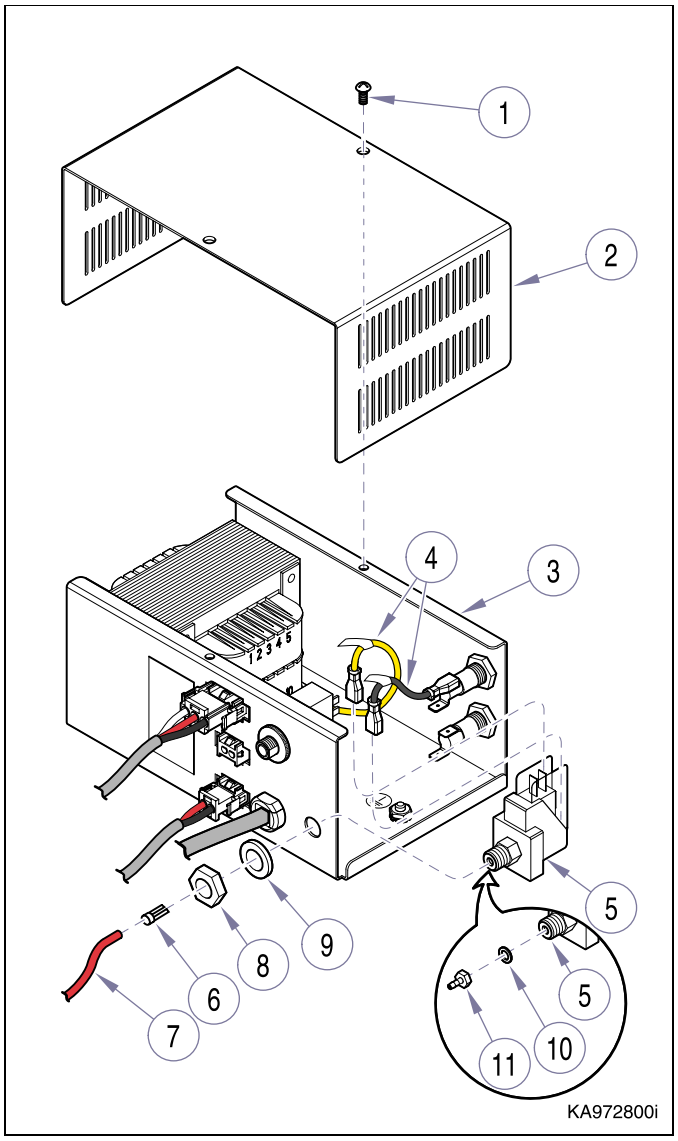

Figure 4-17. Pressure Switch Removal / Installation

(5) Install power supply cover (2) on chassis (3) and secure with two screws (1).

(6) Plug power cord of universal power supply into outlet receptacle.

(7) Install junction box cover (Refer to para 4.2).

4.17 Circuit Breaker Removal / Installation (Applies to chair mounted units powered with a J-Box)

A. Removal

(1) Remove junction box cover (Refer to para 4.2).

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug power cord of universal power supply from outlet receptacle.

(3) Remove two screws (1, Figure 4-18) and power supply cover (2) from chassis (3).

(4) Tag and disconnect wires (4) from terminals of circuit breaker (5).

(5) Remove plastic nut (6) and circuit breaker (5) from chassis (3).

B. Installation

(1) Install circuit breaker (5) on chassis (3) and secure with plastic nut (6).

(2) Connect two wires (4) to terminals of circuit breaker (5).

(3) Install power supply cover (2) on chassis (3) and secure with two screws (1).

(4) Plug power cord of universal power supply into outlet receptacle.

(5) Install junction box cover (Refer to para 4.2).

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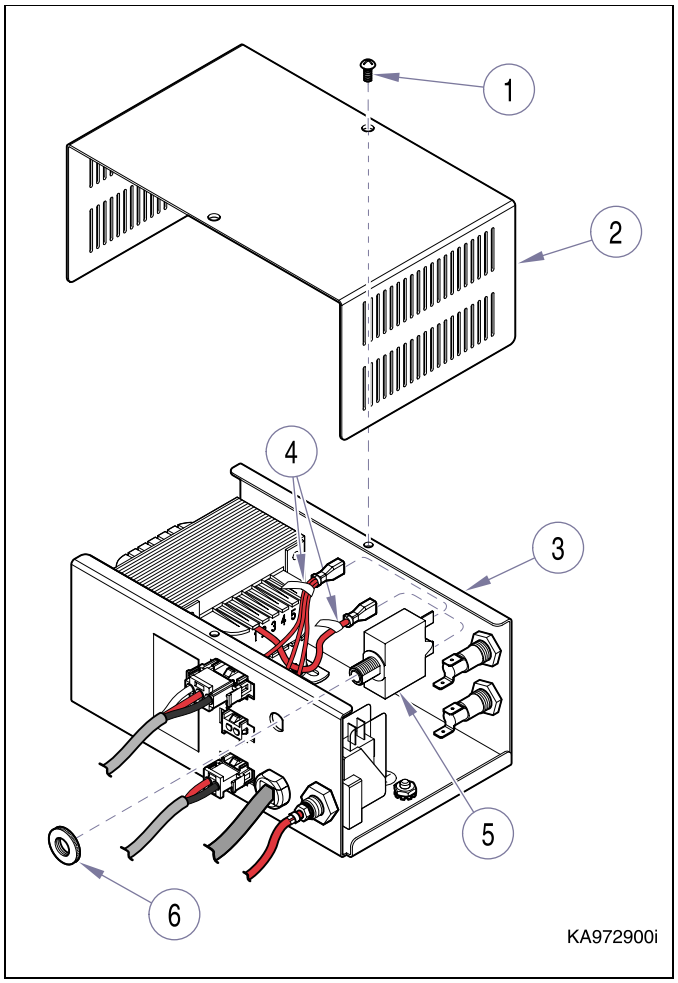

Figure 4-18. Circuit Breaker Removal / Installation

4.18 Fuse Holder Assembly Removal / Installation (Applies to chair mounted units powered with a J-Box)

A. Removal

(1) Remove junction box cover (Refer to para 4.2).

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug power cord of universal power supply from outlet receptacle.

(3) Remove two screws (1, Figure 4-19) and power supply cover (2) from chassis (3).

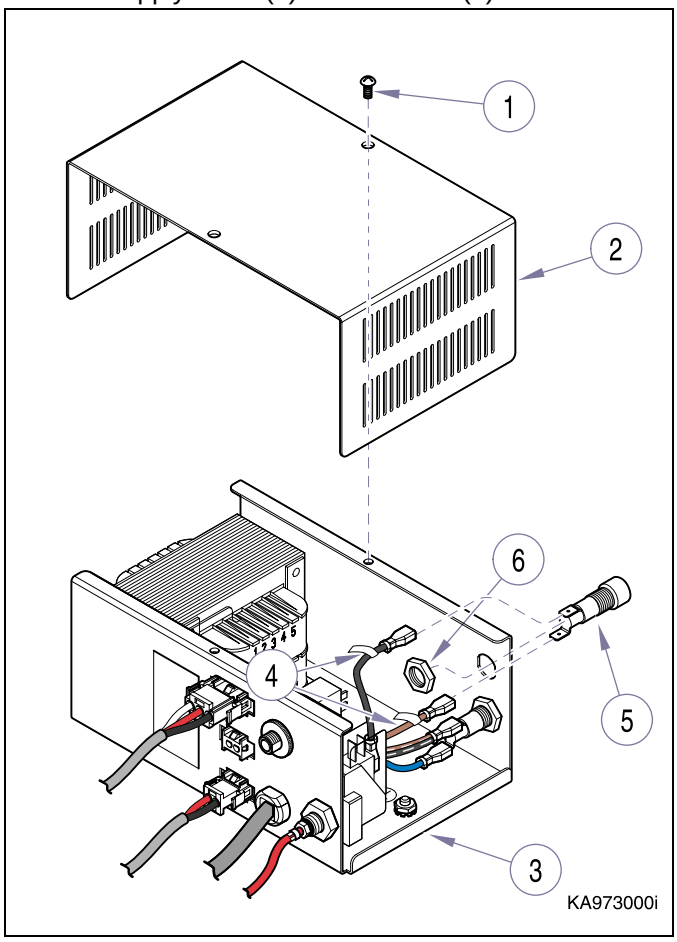

Figure 4-19. Fuse Holder Assembly Removal / Installation

(4) Tag and disconnect wires (4) from terminals of fuse holder assembly (5).

(5) Remove plastic nut (6) and fuse holder assembly (5) from chassis (3).

(6) If necessary, repeat steps for remaining fuse holder assembly.

B. Installation

(1) Install fuse holder assembly (5) on chassis (3) and secure with plastic nut (6).

(2) Connect two wires (4) to terminals of fuse holder assembly (5).

(3) Install power supply cover (2) on chassis (3) and secure with two screws (1).

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(4) Plug power cord of universal power supply into outlet receptacle.

(5) Install junction box cover (Refer to para 4.2).

4.19 Light Control Board Removal / Installation

A. Removal

(1) Turn ***OFF*** power to unit.

NOTE
On some units, end cap removal differs slightly. Also, on some units, both end caps may need removed.

(2) Remove screw (1, Figure 4-20) and arm end-cap (2) from light arm channel (3).

(3) Slide light arm cover (4) backward approximately 12 in. (30.5 cm) to gain access to light control board (5).

(4) Tag four wires (6); then loosen four terminal screws (7) and disconnect four wires (6) from terminal (8).

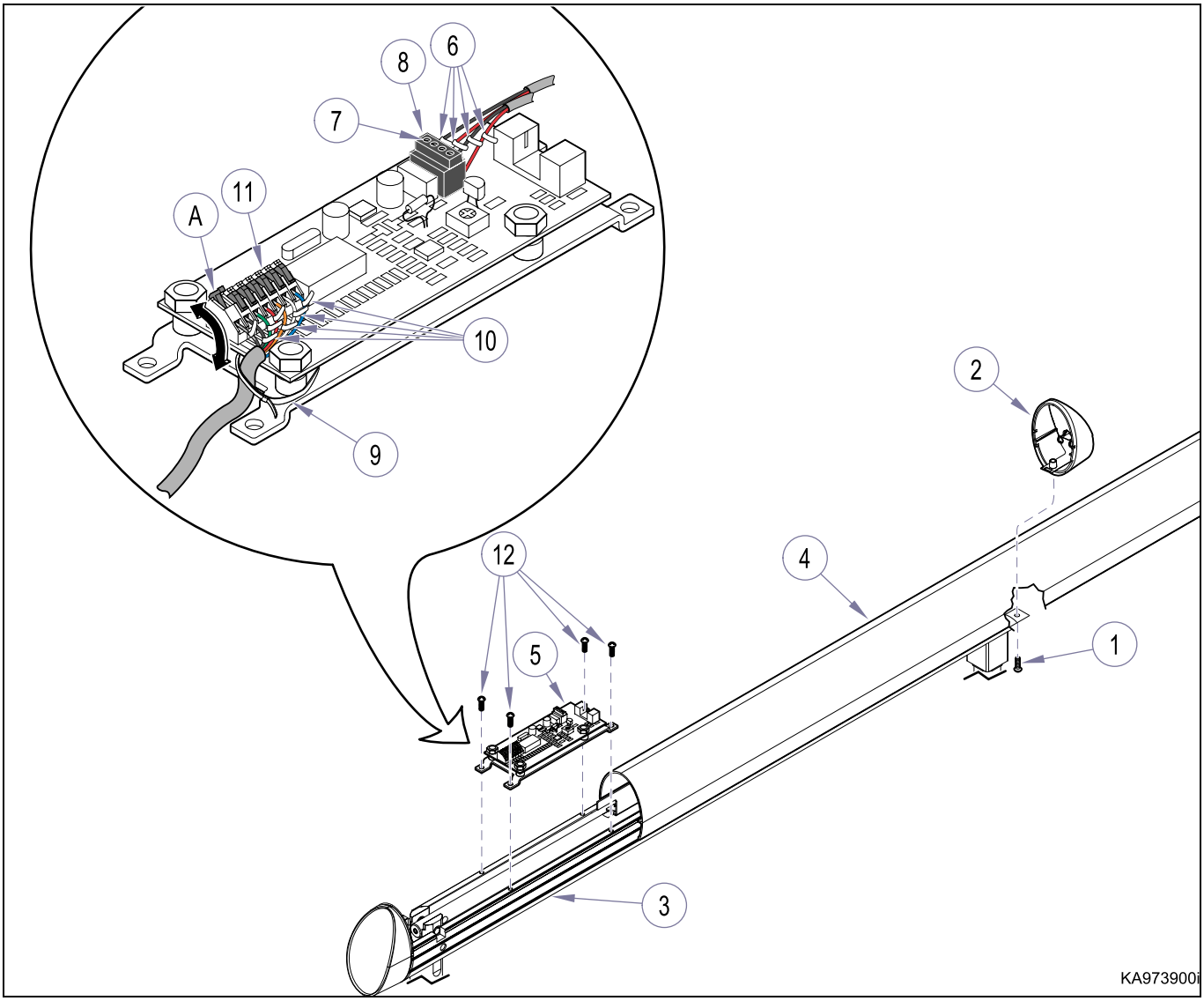

Figure 4-20. Light Control Board Removal / Installation

(5) Cut cable tie (9) securing seven wires (10) to light control board (5).

(6) Tag seven wires (10); then unlock seven locking levers (A), by rotating them upward to unlocked position, and disconnect seven wires (10) from terminal (11).

(7) Remove four screws (12) and light control board (5) from light arm channel (3).

B. Installation

CAUTION
When connecting wires (10) to terminal (11), use care to ensure that all strands of wire are captured inside its terminal slot. Loose strands of wire could cause a short to the light control board causing damage or operational problems

(1) Insert seven wires (10) in appropriate slot of terminal (11) and secure in place by rotating locking levers (A) downward into locked position.

(2) Install light control board (5) on light arm channel (3) and secure with four screws (12).

(3) Secure seven wires (10) to corner of light control board (5) with cable tie (9).

(4) Connect four wires (6) to appropriate slot of terminal (8) and secure in place by tightening terminal screws (7).

(5) Slide light arm cover (4) back onto light arm channel (3) fully.

(6) Install arm endcap (2) on light arm channel (3) and secure with screw (1).

4.20 AUTO ON Mode Set Point Adjustment

A. Adjustment

NOTE
This adjustment allows the user to set desired height (when light arm is being lowered) of light arm at which ***AUTO ON*** mode is activated (light automatically turns on).

On some units, end cap removal differs slightly. Also, on some units, both end caps may need removed.

(1) Remove screw (1, Figure 4-21) and arm endcap (2) from light arm (3).

(2) Slide light arm cover (4) backward approximately 14 in. (35.5 cm) to gain access to light control board (5).

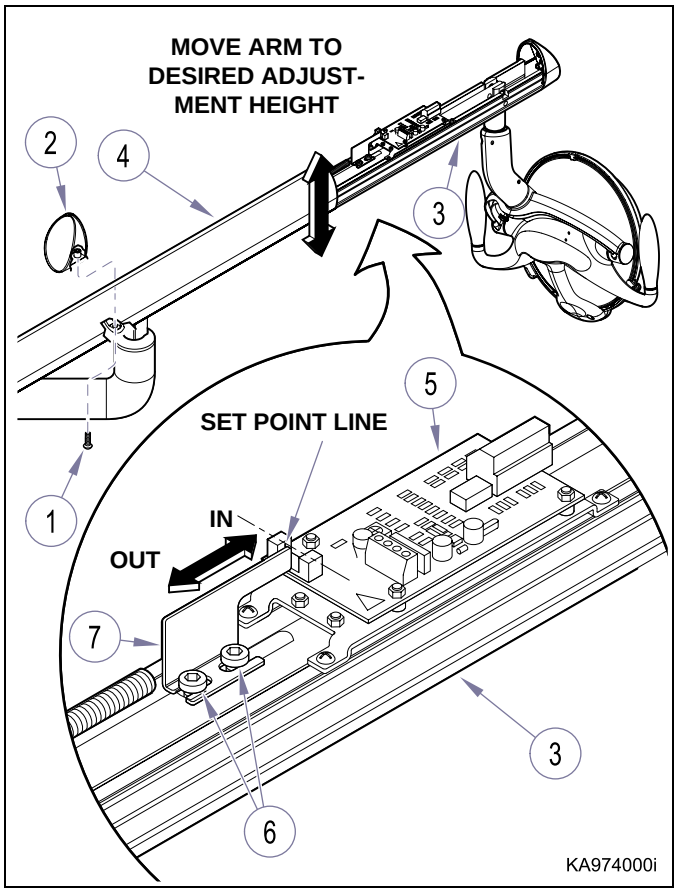

Figure 4-21. AUTO ON Mode Set Point Adjustment

(3) Press **POWER** button until light is in ***AUTO ON*** mode.

NOTE
Consult the user of the light to determine the preferred ***AUTO ON*** height.

(4) Position light arm (3) at desired height for ***AUTO ON*** mode to activate; hold light arm in this position during next step.

(5) Loosen two screws (6) and slide trigger (7) all the way ***out***; then slowly slide trigger ***in*** until lighthead turns on (at set point line). Secure trigger in this position by tightening two screws (6).

(6) Raise and lower light arm (3) to verify set point of ***AUTO ON*** mode is set as desired. Repeat steps 4 and 5 as necessary.

(7) Slide light arm cover (4) back onto light arm (3) fully.

(8) Install arm endcap (2) on light arm (3) and secure with screw (1).

4.21 Circuit Breaker Reset / Fuse Replacement

A. Reset or Replacement

NOTE
There is a circuit breaker and two line fuses to check; the transformer output circuit breaker which can be reset and two transformer line input fuses which are one time use and must be replaced if blown.

(1) Remove junction box cover (Refer to para 4.2).

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(2) Unplug power cord of universal power supply from outlet receptacle.

EQUIPMENT ALERT
Do not just reset circuit breaker or replace blown fuse. First, determine reason why circuit breaker tripped or fuse opened. Failure to do so could result in damage to unit.

(3) Check position of white reset button (1, Figure 4-22) of circuit breaker. If reset button is flush, the circuit breaker is not tripped. If reset button is protruding, press the reset button to reset the circuit breaker.

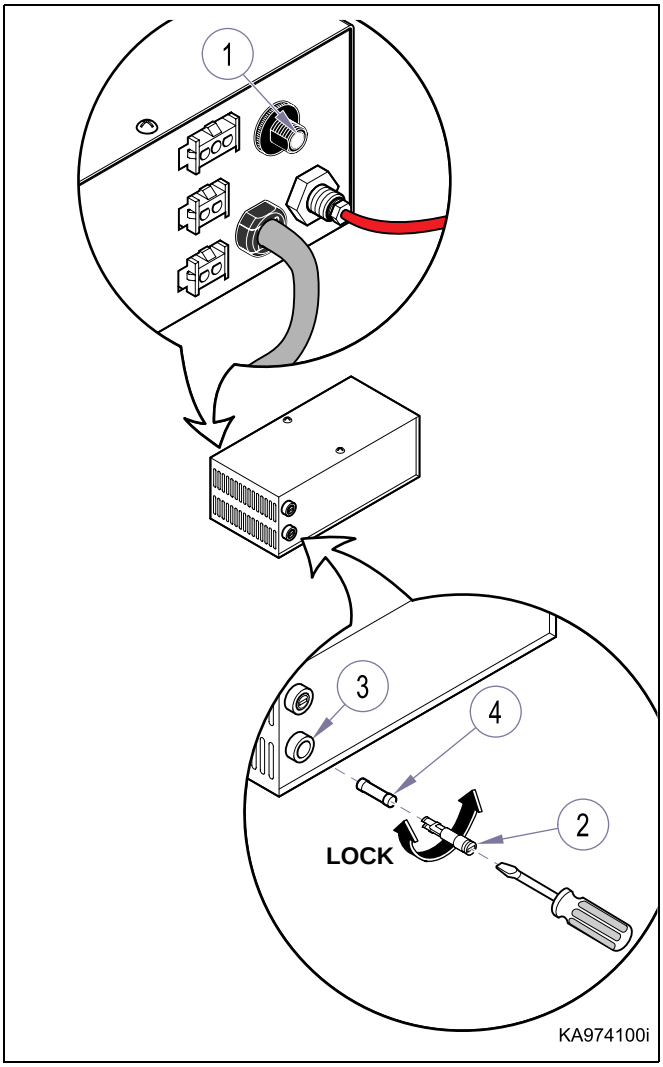

Figure 4-22. Circuit Breaker Reset / Fuse Replacement

(4) Using a screwdriver, gently depress fuse cap (2) and then rotate 1/4 turn to left to free fuse cap. Pull fuse cap (2) from fuse body (3). Repeat step for remaining fuse.

(5) Remove fuse(s) (4) from fuse cap(s) and inspect. If a fuse is discolored, blackened, has burnt or hot look, or fuse element is burnt through, fuse is blown and must be replaced.

(6) Insert fuse(s) (4) in fuse cap(s) (2).

(7) Insert fuse cap (2) into fuse body (3). Using a screwdriver, gently depress fuse cap and then rotate 1/4 turn to right to secure fuse cap. Repeat step for remaining fuse.

(8) Plug power cord of universal power supply into outlet receptacle.

(9) Install junction box cover (Refer to para 4.2).

4.22 Flex Arm Spring Tension Adjustment

A. Adjustment

NOTE
On some units, both end caps will need to be removed to gain access. The rear most end cap on these units will not be held in by screws, but by plastic buttons on the end cap itself.

(1) Remove screw (1, Figure 4-23) and arm endcap (2) from light arm (3).

(2) Slide light arm cover (4) backward approximately 20 in. (51 cm) to gain access to tension adjustment nut (5).

(3) Using a 1/2 in. open end wrench, adjust tension adjustment nut (5) to increase or decrease spring tension.

(4) Raise and lower light arm and then position light arm in a horizontal position and observe to verify that light arm is not stiff and is easy to use, yet will not drift downward by itself. Repeat step 3 as necessary.

(5) Slide light arm cover (4) back onto light arm (3) fully.

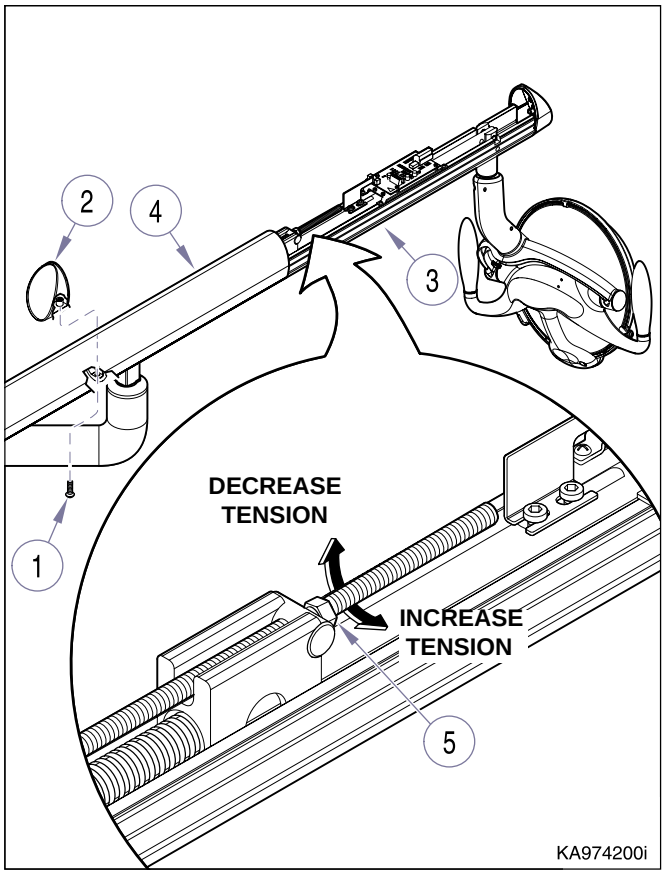

Figure 4-23. Flex Arm Spring Tension Adjustment

(6) Install arm endcap (2) on light arm (3) and secure with screw (1).

4.23 Pivot Joint Tension Adjustments

NOTE
Consult the user of the light to determine the preferred tension adjustments.

A. Lighthead Pivot Joint Adjustment

(1) Use screwdriver to pry off screw cover (1, Figure 4-24).

(2) Using 5/64 in. Allen Wrench, loosen set-screw (2).

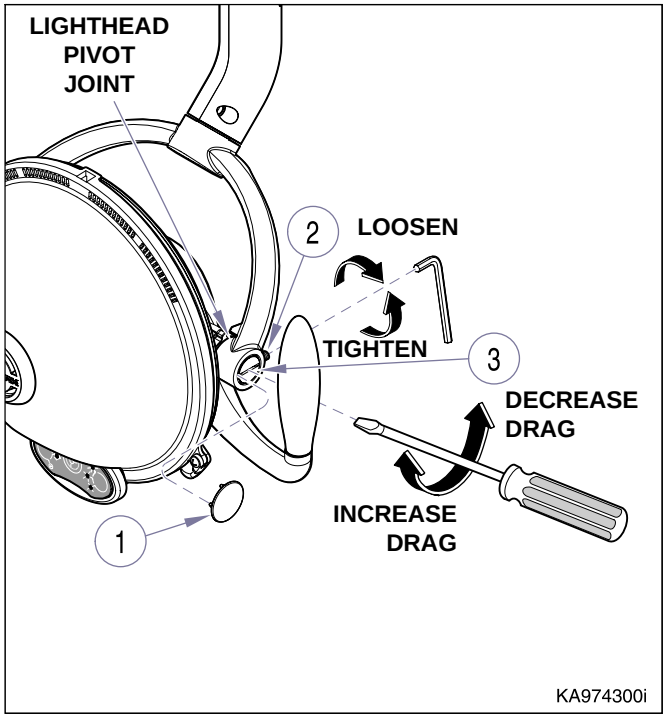

Figure 4-24. Lighthead Pivot Joint Adjustment

(3) Using screwdriver, adjust tension screw (3) until desired drag effect in pivot joint is achieved.

(4) Tighten setscrew (2) and install screw cover (1).

B. Yoke Pivot Joint Adjustment

(1) ***To adjust drag at yoke pivot joint***, use 9/64 in. Allen Wrench adjust yoke tension screw (1, Figure 4-25) until desired drag effect in pivot joint is achieved.

(2) ***To adjust drag at arm pivot joint***, use 9/64 in. Allen Wrench to adjust arm tension screw (2) until desired drag effect in pivot joint is achieved.

(3) Repeat steps 1 and 2 as necessary until desired drag tension in joints is achieved.

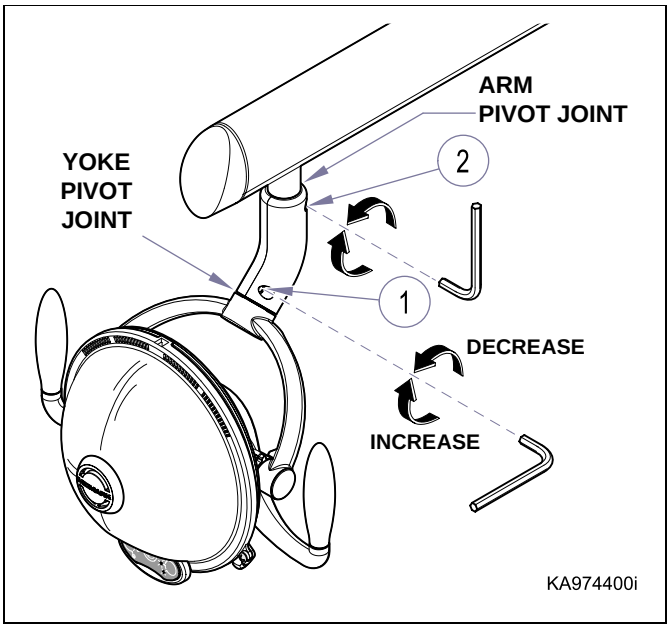

Figure 4-25. Yoke Pivot Joint Adjustment

4.24 LR Light Arm Leveling

A. Adjustment

EQUIPMENT ALERT
If a delivery unit is also mounted on LR mounting bracket with LR light, care must be taken to make sure that leveling light arm does not put delivery unit arms “out-of-level”.

(1) Remove four screws (1, Figure 4-26) and connection cover (2) from connection box (3).

(2) Position light arm (4) straight out from foot end of chair as shown in illustration.

(3) Tighten screw (5) as necessary

(4) Adjust three leveling screws (6) until light arm is plumb. When checking light arm to ensure it is plumb, place level at two spots on light arm 90^{o} apart.

(5) Install connection cover (2) on connection box (3) and secure with four screws (1).

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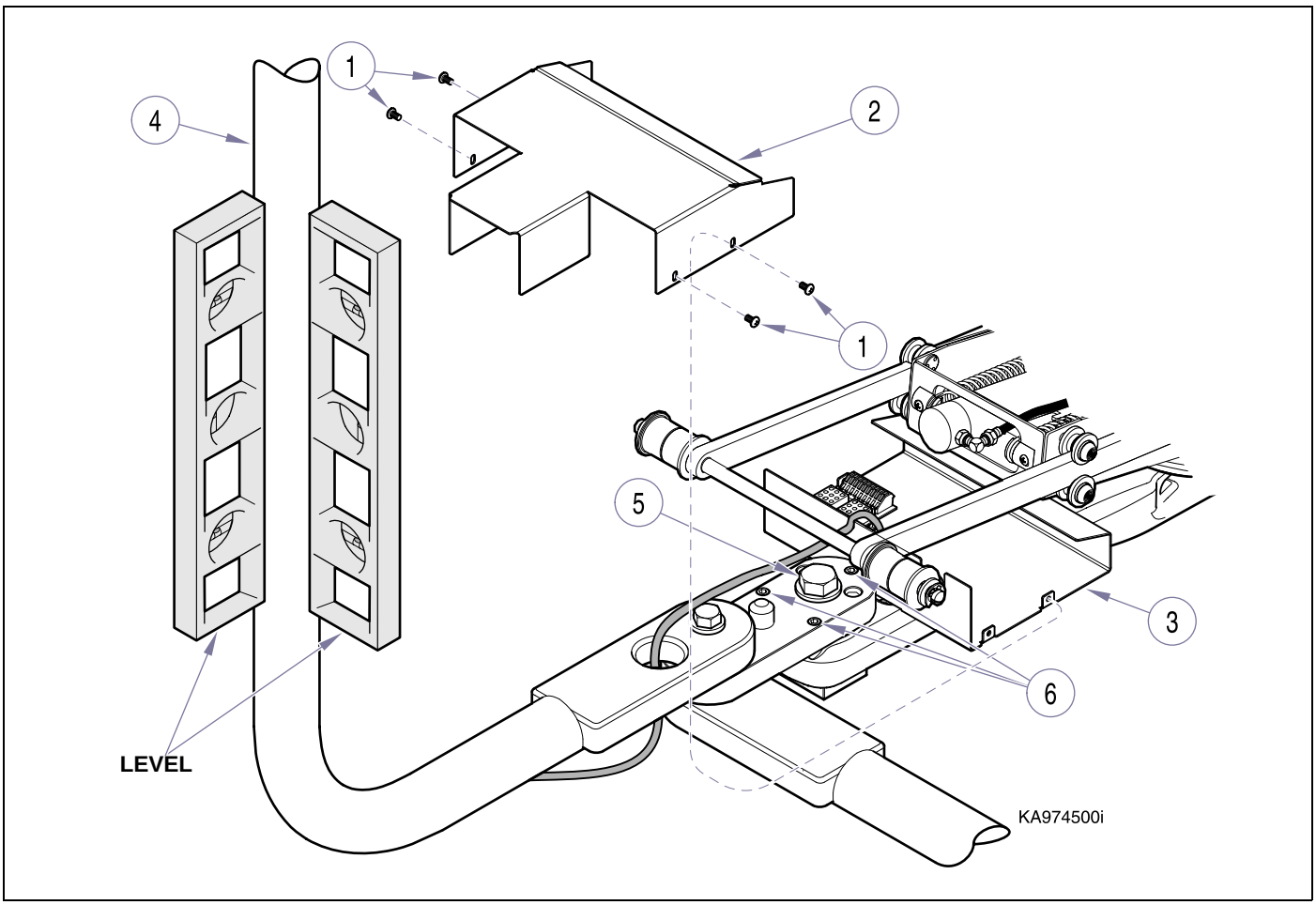

Figure 4-26. LR Light Arm Leveling

4.25 Console Light Arm Leveling

A. Adjustment

EQUIPMENT ALERT
If a delivery unit is also mounted on console which has a light system, care must be taken to make sure that leveling light arm does not put delivery unit arms "out-of-level".

(1) Remove LH and RH console covers (1, Figure 4-27) from console frame (2) by pulling outward on bottom of console covers until they "pop" loose.

(2) Loosen eight leveling screws (3) until they are fully retracted.

(3) Using a level, position light arm (4) so that it is plumb; then adjust eight leveling screws (3) until they are contacting post (A) of console frame (2).

(4) Adjust eight leveling screws (3) as necessary to fine tune leveling of light arm (4). When checking light arm to ensure it is plumb, place level at two spots on light arm 90^{o} apart.

(5) Slide top of LH console cover (1) under top cover (5); then align three ball studs (B) on console cover with three stud fasteners (C) on console frame (2).

(6) Push gently inward on console cover (1) until it "snaps" into place. Repeat steps 5 and 6 for RH console cover.

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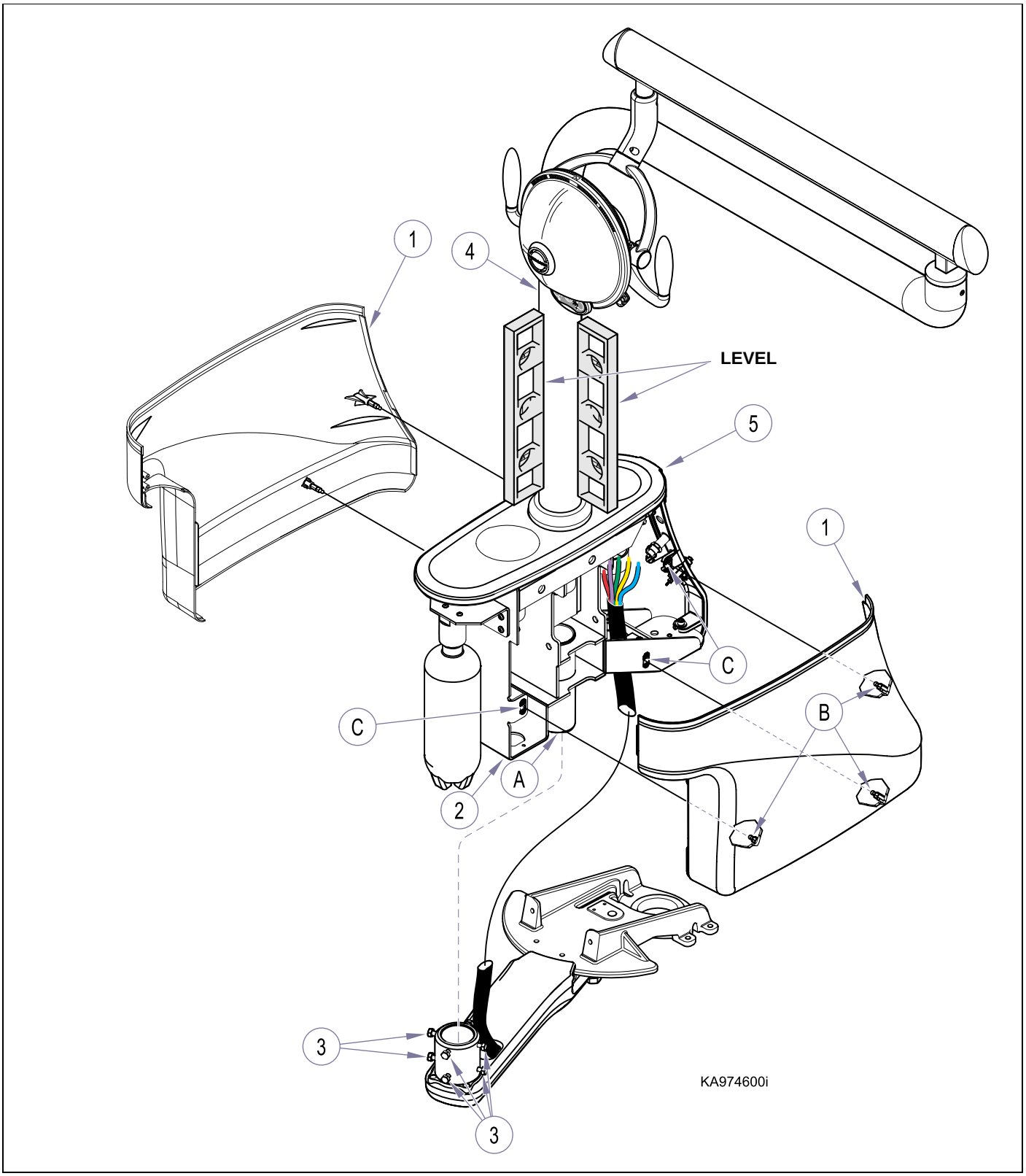

Figure 4-27. Console Light Arm Leveling

4.26 Ceiling Light Arm Leveling

A. Adjustment

WARNING
Always disconnect electrical power from the unit before removing any of the unit's covers/shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in severe personal injury or death.

(1) Turn ***OFF*** facility power breaker so there is no power to light unit.

(2) Loosen two setscrews (1, Figure 4-28) and lower ceiling cover (2) down out of way.

(3) Loosen three jam nuts (3).

(4) Place level on suspension tube (4) and adjust three hex nuts (5) until suspension tube is plumb; then tighten three jam nuts (3).

(5) Position ceiling cover (2) up against ceiling and then secure in position with two setscrews (1).

(6) Turn ***ON*** facility power breaker so there is power to light unit.

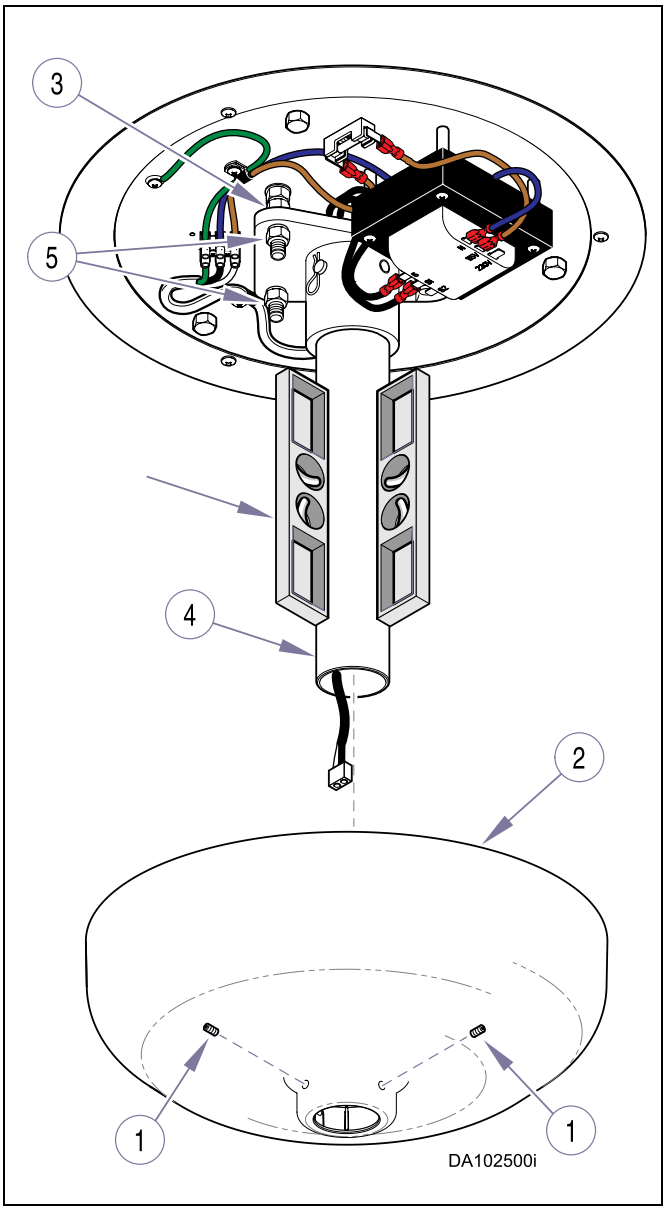

Figure 4-28. Ceiling Light Leveling

SECTION V
SCHEMATICS AND DIAGRAMS

5.1 Electrical Schematics / Wiring Diagrams.

Figures 5-1 thru 5-6 illustrate the logic / current flow between the electrical components in the unit as well as the wiring connections between the electrical components in the unit.

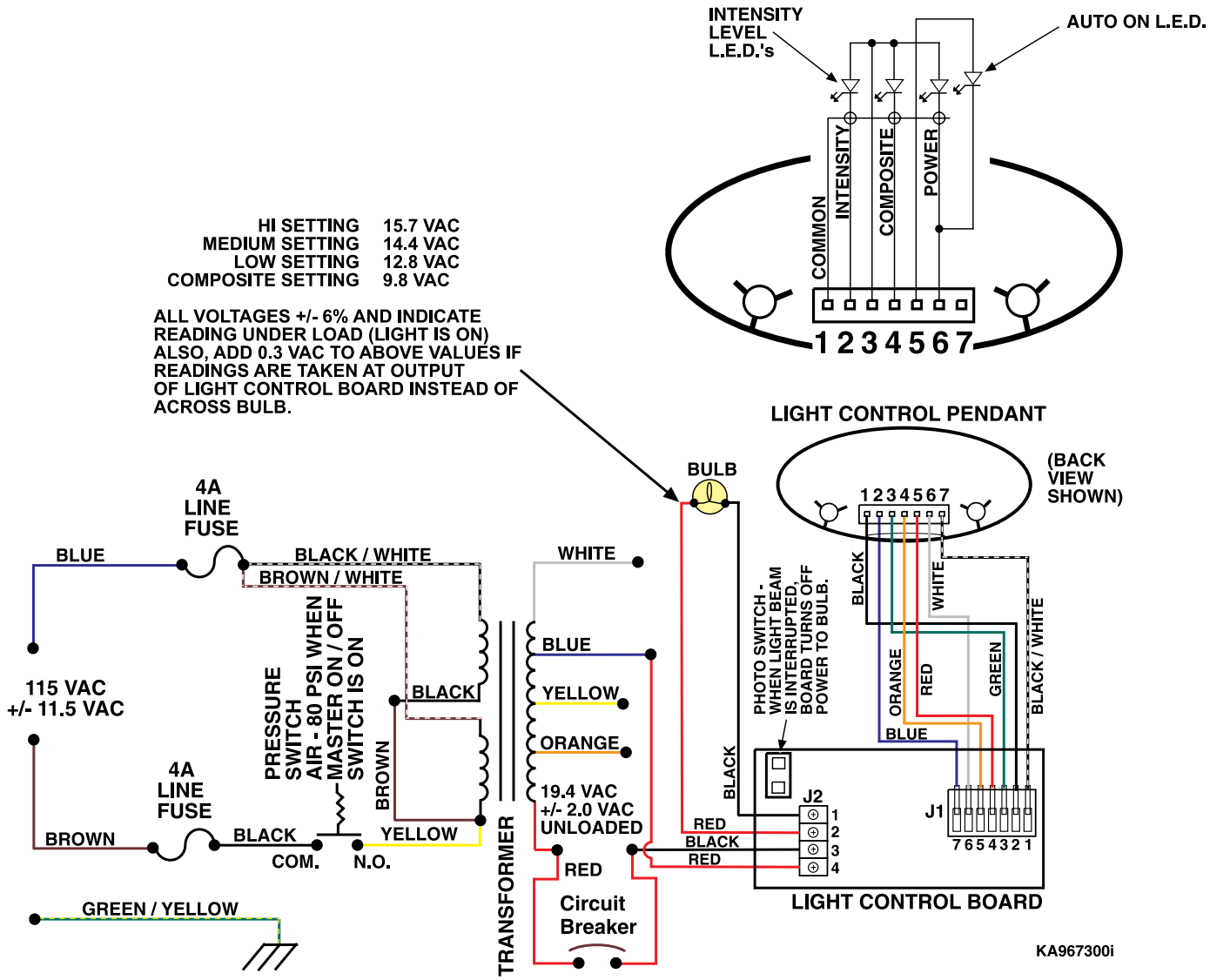

Figure 5-1. Chair Mounted Light Electrical Schematic

SECTION V
SCHEMATICS AND DIAGRAMS

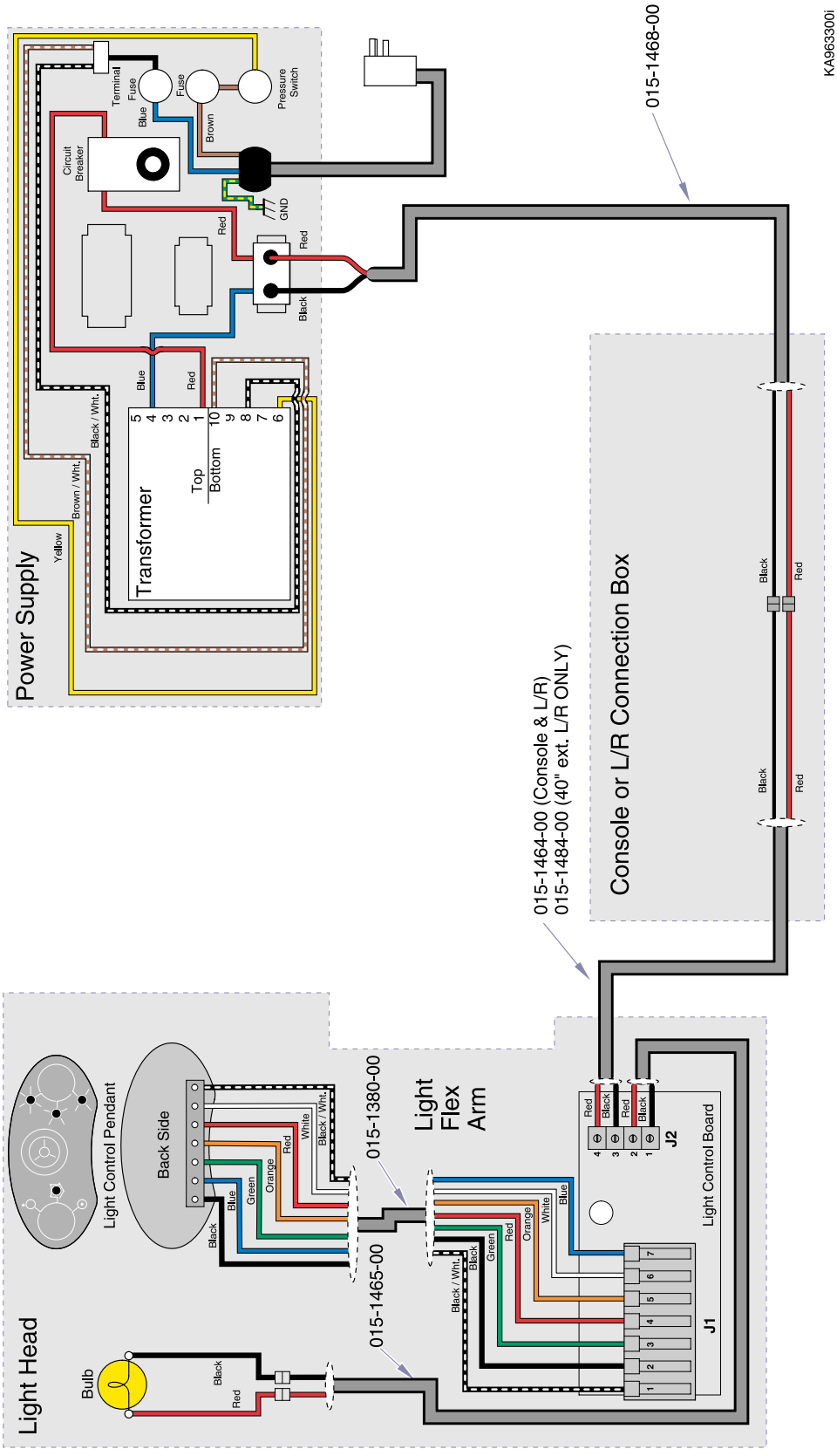

Figure 5-2. Chair Mounted Light Wiring Diagram

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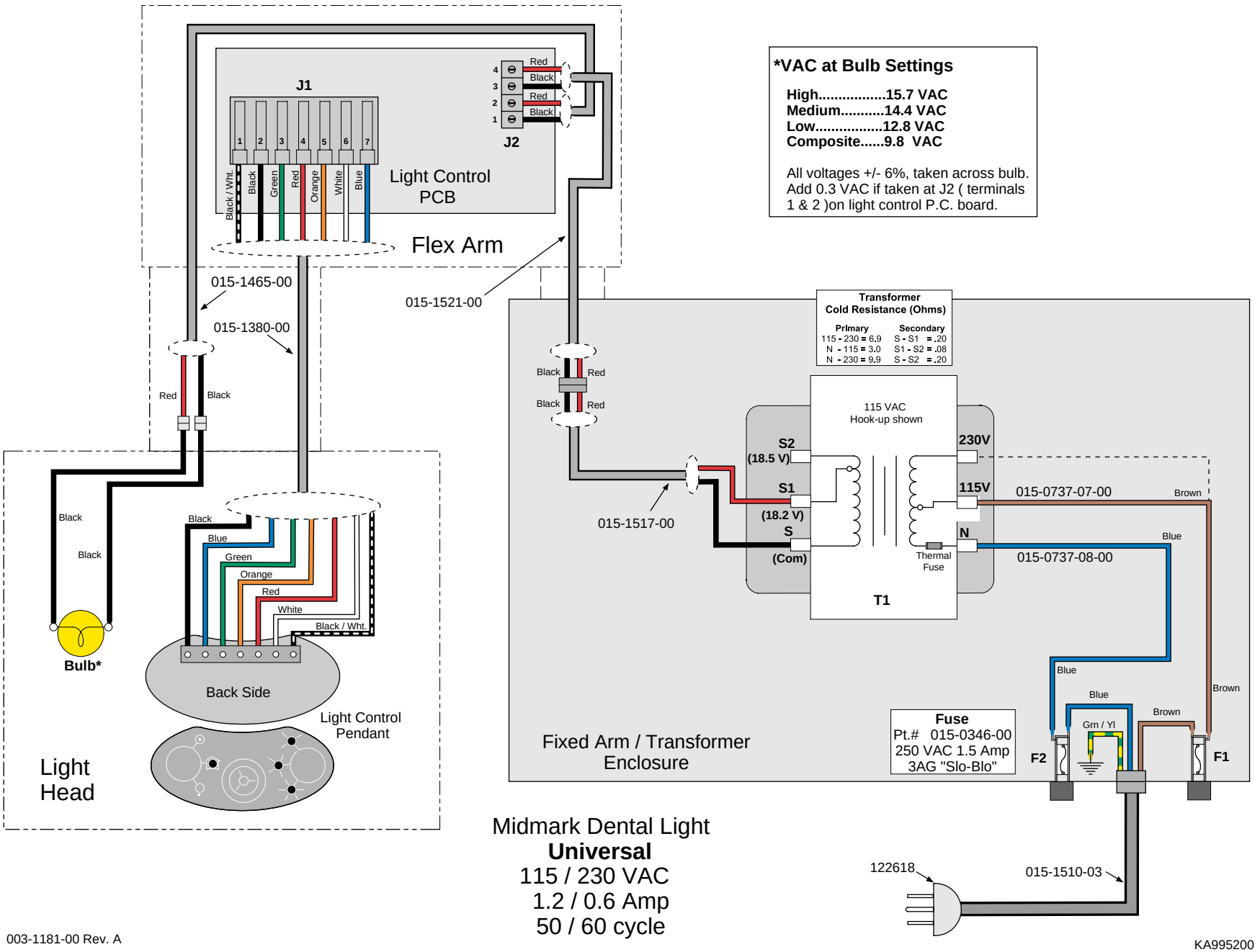
Return To Table Of Contents



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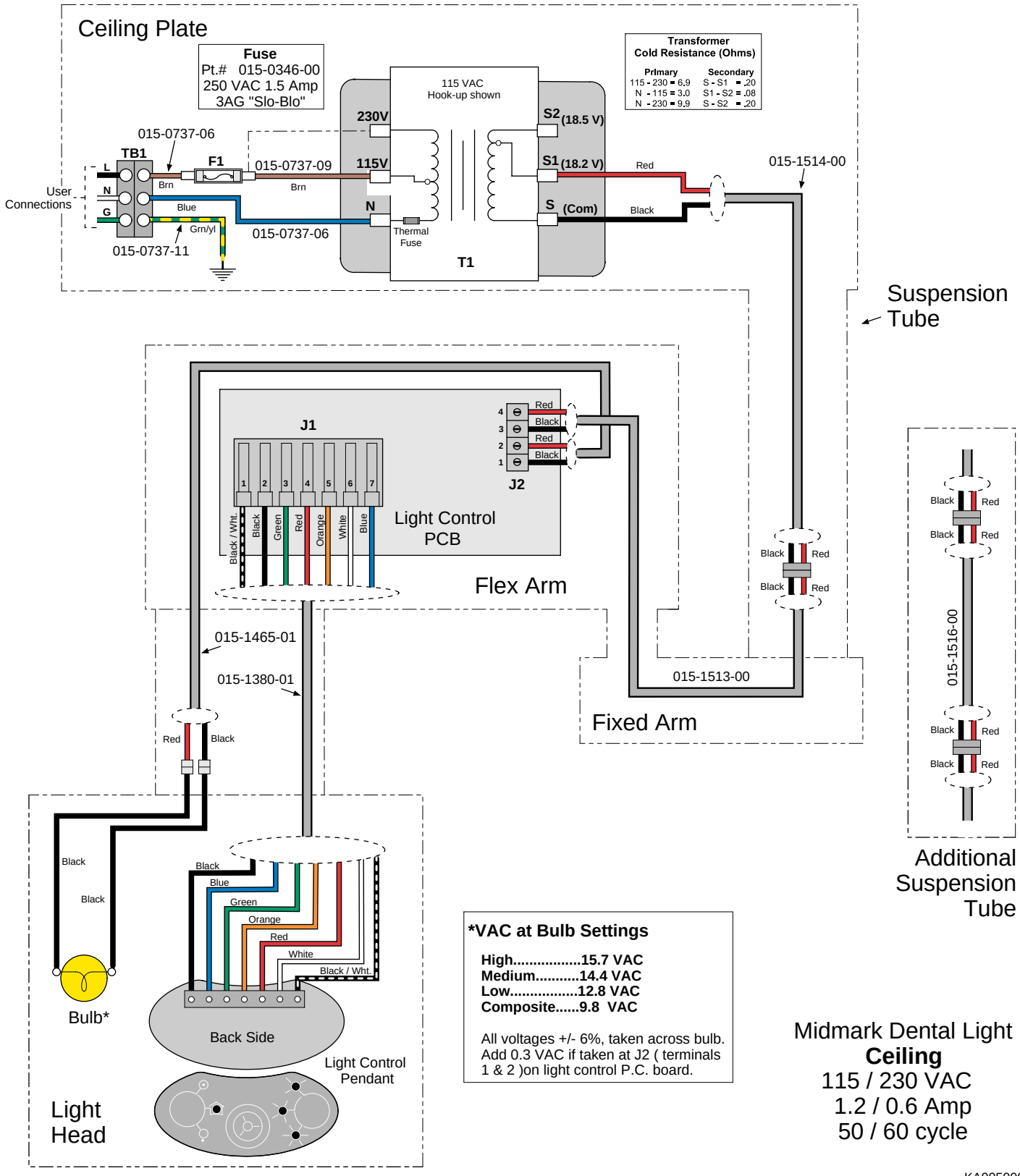
SECTION V
SCHEMATICS AND DIAGRAMS



***VAC at Bulb Settings**

High.....15.7 VAC
Medium.....14.4 VAC
Low.....12.8 VAC
Composite.....9.8 VAC

All voltages +/- 6%, taken across bulb. Add 0.3 VAC if taken at J2 (terminals 1 & 2)on light control P.C. board.

Midmark Dental Light
Ceiling
115 / 230 VAC
1.2 / 0.6 Amp
50 / 60 cycle

003-1180-00 Rev. A

KA995000

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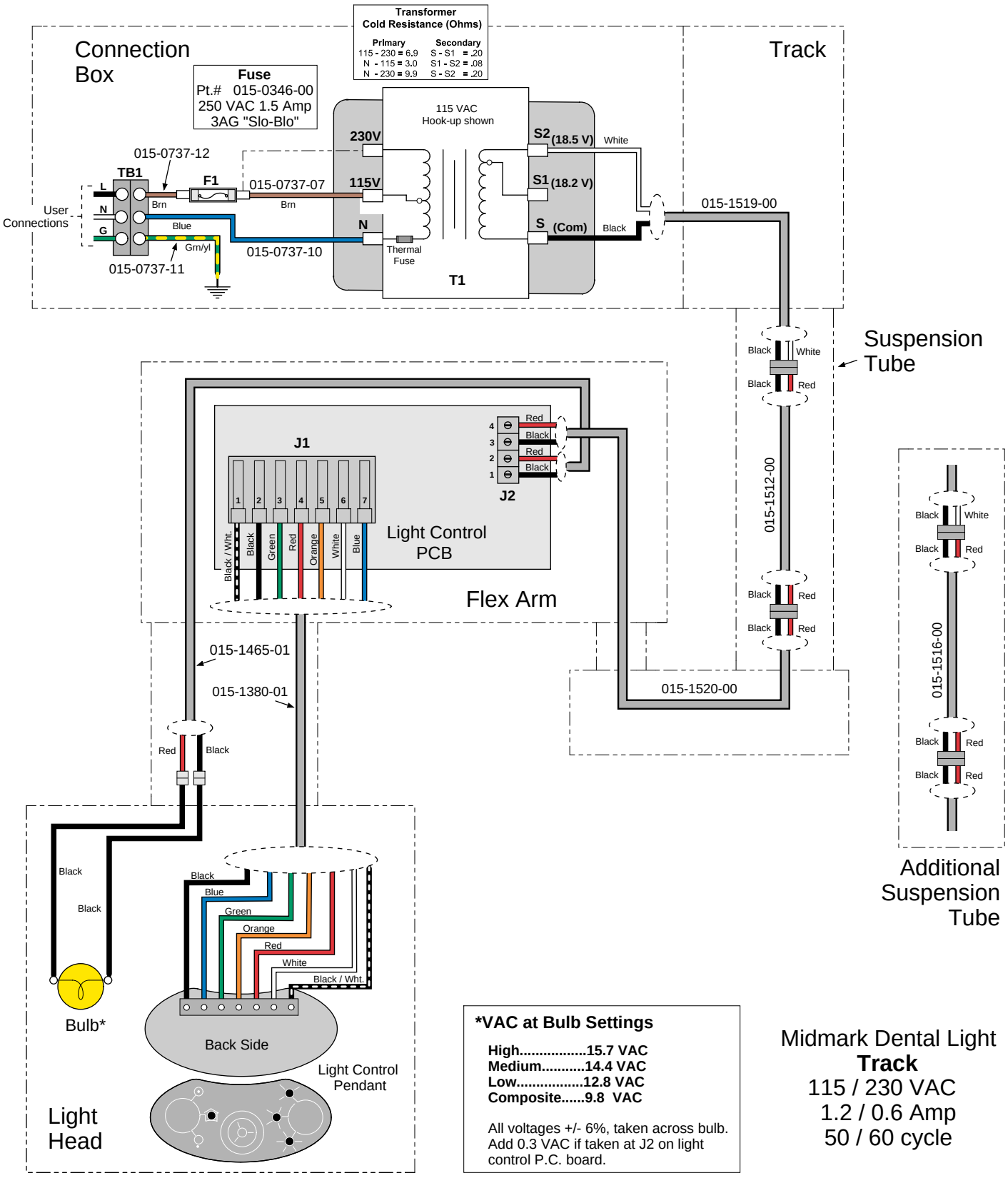


***VAC at Bulb Settings**

High.....15.7 VAC
Medium.....14.4 VAC
Low.....12.8 VAC
Composite.....9.8 VAC

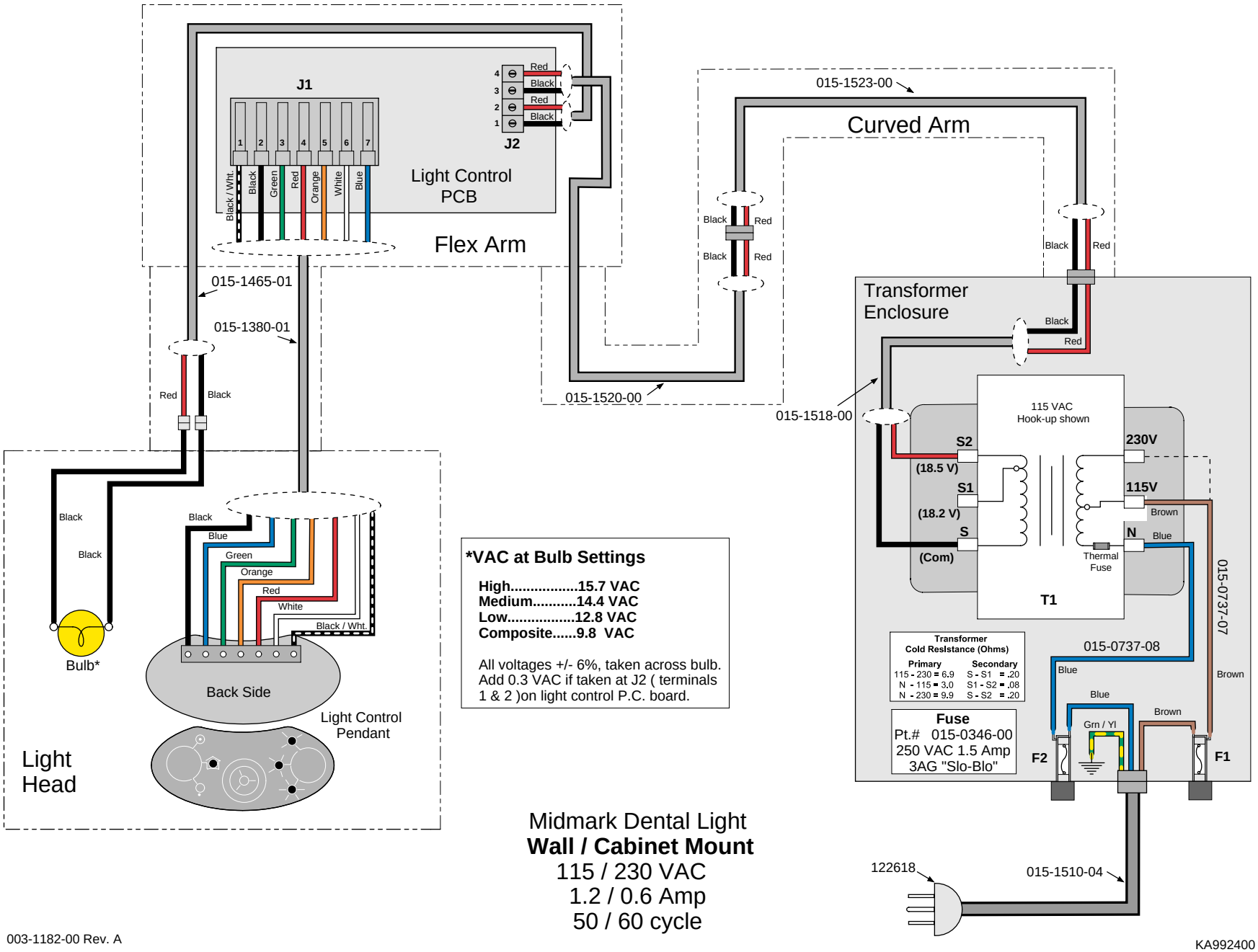
All voltages +/- 6%, taken across bulb. Add 0.3 VAC if taken at J2 on light control P.C. board.

Midmark Dental Light
Track
115 / 230 VAC
1.2 / 0.6 Amp
50 / 60 cycle

KA995100

003-1179-00 Rev. A

Return To Table Of Contents



***VAC at Bulb Settings**

High.....15.7 VAC
Medium.....14.4 VAC
Low.....12.8 VAC
Composite.....9.8 VAC

All voltages +/- 6%, taken across bulb. Add 0.3 VAC if taken at J2 (terminals 1 & 2)on light control P.C. board.

Midmark Dental Light
Wall / Cabinet Mount
115 / 230 VAC
1.2 / 0.6 Amp
50 / 60 cycle

003-1182-00 Rev. A

KA992400

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SECTION VI
PARTS LIST

6.1 Introduction

The illustrated parts list provides information for identifying and ordering the parts necessary to maintain the unit in peak operating condition. Refer to paragraph 1.5 for parts ordering information.

6.2 Description of Columns

The Item column of the parts list gives a component its own unique number. The same number is given to the component in the parts illustration. This allows a part number of a component to be found if the technician can visually spot the part on the illustration. The technician simply finds the component in question on the illustration and notes the item number of that component. Then, he finds that item number in the parts list. The row corresponding to the item number gives the technician the part number, a description of the component, and quantity of parts per subassembly. Also, if a part number is known, the location of that component can be determined by looking for the item number of the component on the illustration.

The Part No. column lists the MIDMARK part number for that component.

The Description column provides a physical description of the component.

The Qty. column lists the number of units of a particular component required for the subassembly. The letters “AR” denote “as required” when quantities of a particular component cannot be determined, such as: adhesive.

Bullets { • } in the Part No. column and the Description column show the indenture level of a component. If a component does not have a bullet, it is a main component of that illustration. If a component has a bullet, it is a subcomponent of the next component listed higher in the parts list than itself that does not have a bullet. Likewise, if a component has two bullets, it is a subcomponent of the next component listed higher in the parts list than itself that has only one bullet.

6.3 Torque Specifications and Important Assembly Notes

When specific assembly torque specifications, measurements, or procedures have been identified, by our engineering department, as required to assure proper function of the unit, those torque specifications measurements, and procedures will be noted on the parts illustrations. Adherence to these requirements is essential.

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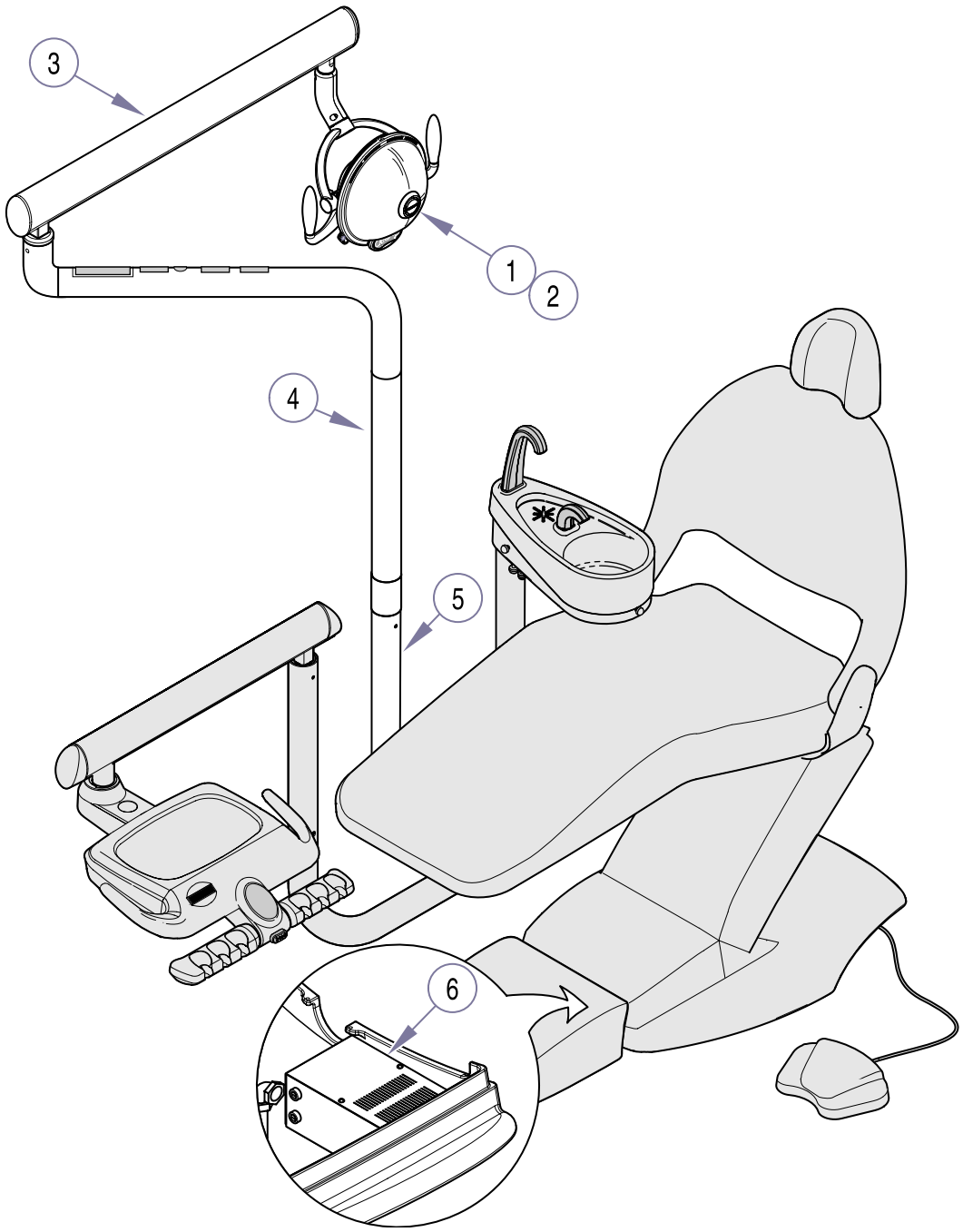
L/R Mounted Light
Pictorial Index



KA990600i

Item	Part No.	Description	Qty
	153585-001	Console Mounted Dental Light Assembly (Includes Items 1 thru 5)	1
1		Refer to "Lighthead Assembly")	Ref
2		Dental Light Lamp (Not Shown) Refer to "Lighthead Assembly"	Ref
3		Flex Arm Assy. (Refer to "*Flex Arm Assy-Chair Mtd. Lights*")	Ref
4		Curved Arm Assembly (Refer to "L/R Light Mounting Components")	1
5		L/R Lower Arm Assembly (Refer to "L/R Lower Arm Assembly")	1
6		Refer to "Power Supply Assembly"	Ref

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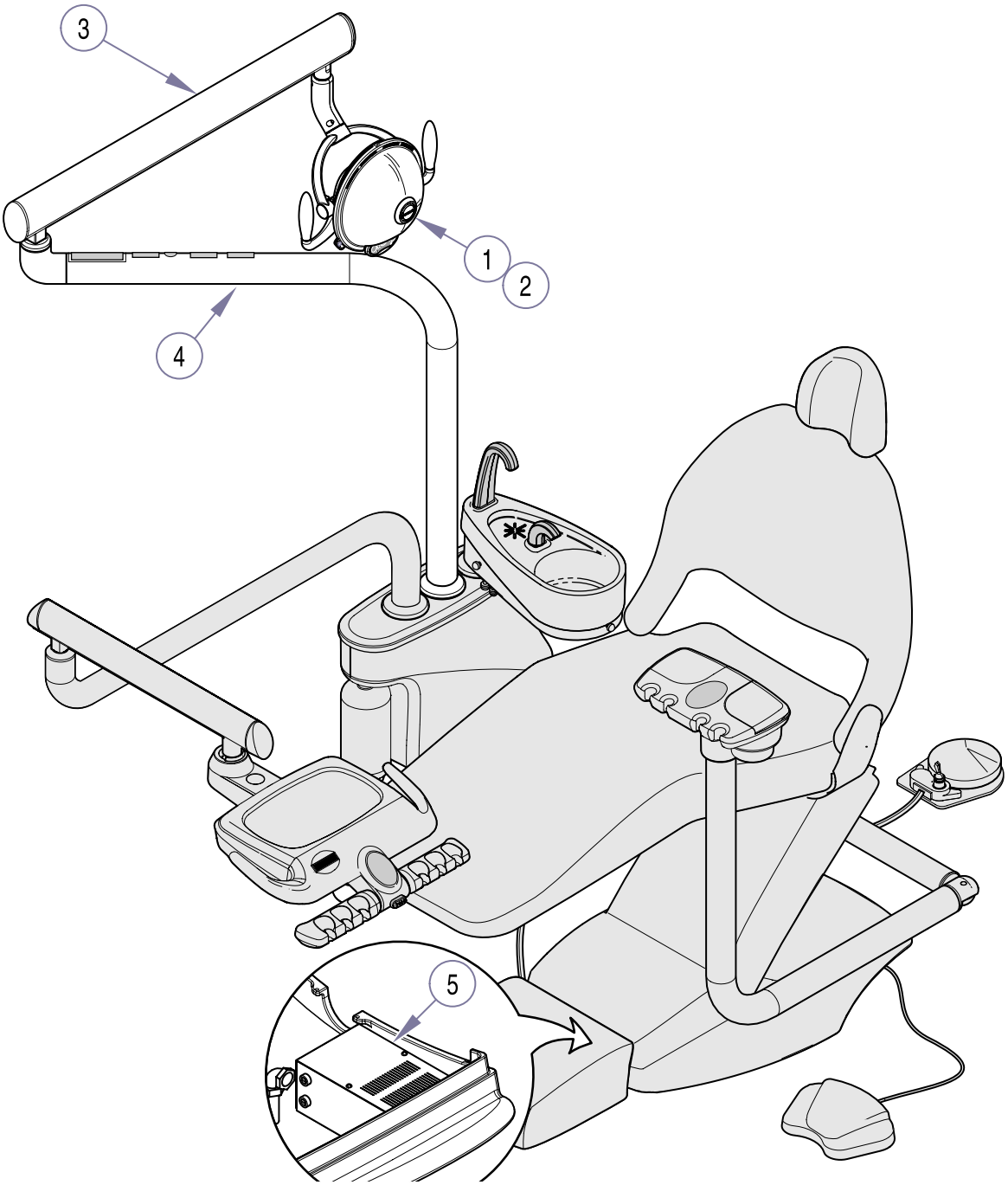
Console Mounted Light Pictorial Index



KA990500i

Item	Part No.	Description	Qty
	153585-001	Console Mounted Dental Light Assembly (Includes Items 1 thru 5)	1
1		Lighthead Assy. (Refer to "Lighthead Assembly")	Ref
2		Dental Light Lamp (not shown) (Refer to "Lighthead Assembly")	Ref
3		Flex Arm Assy. (Refer to "*Flex Arm Assy - Chair Mtd. Lights*")	Ref
4		Console Mounted Light Assy. (Refer to "Console Light Mtg. Components")	Ref
5		Power Supply Assy. (Refer to "Power Supply Assembly")	Ref

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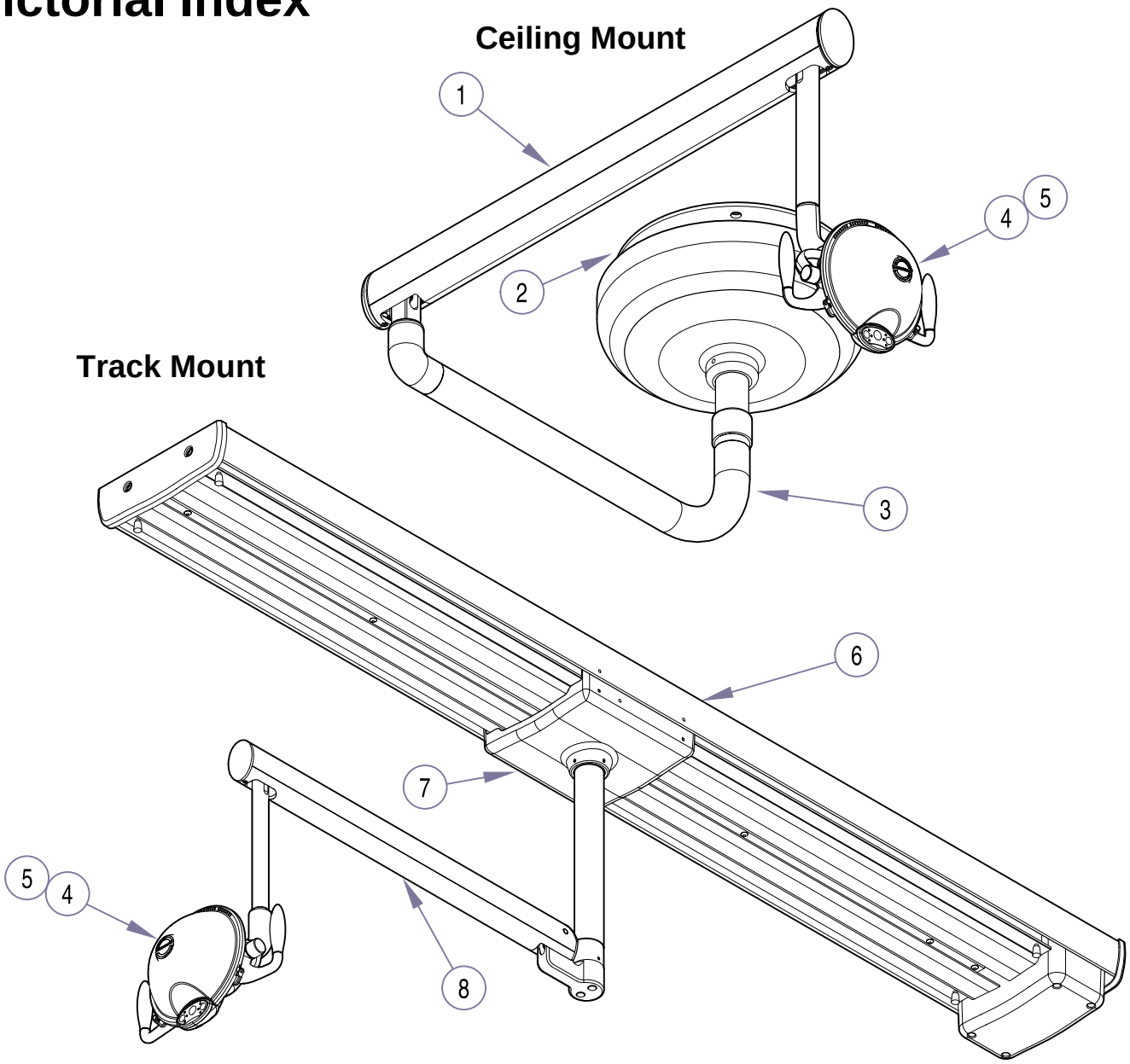
Ceiling & Track Mounted Light Pictorial Index



KA982400i

Item	Part No.	Description	Qty
	153637-001	Ceiling Dental Light Assembly (Includes Items 1 thru 5)	1
	153638-001	Track Light Assembly (Includes Items 4 thru 8)	1
1	•	• Flex Arm Assembly (Refer to "Flex Arm Assy- *Ceiling Mtd Lights*")	Ref
2	•	• Ceiling Plate Assembly (Refer to "Ceiling Plate Assembly")	Ref
3	•	• Fixed Arm Assembly (Refer to "Ceiling Light Mtg Components")	Ref
4	•	• Light Head Assembly (Refer to "Lighthead Assembly")	Ref
5	•	• Dental Light Lamp (Not Shown) (Refer to "Lighthead Assembly")	Ref
6	•	• Track Assembly (Refer to "Track Assembly")	Ref
7	•	• Trolley Assembly (Refer to "Trolley Assembly")	Ref
8	•	• Flex Arm Assembly (Refer to "Flex Arm Assy- *Track, Wall, & Cabinet Mounted Lights*")	Ref

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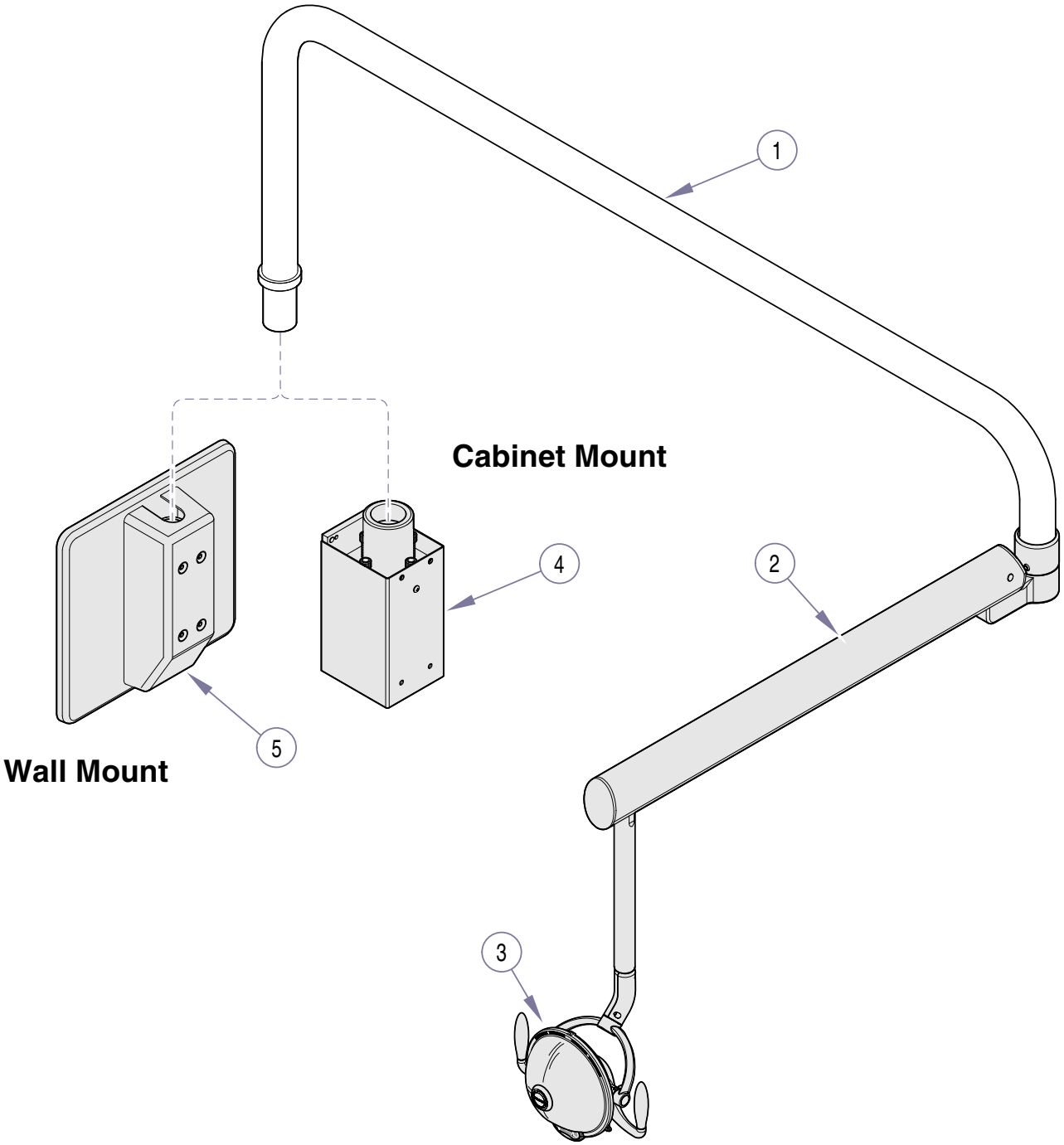
Wall & Cabinet Mounted Light Pictorial Index



KA979300i

Item	Part No.	Description	Quantity
1	030-1309-50	Wall/Cabinet Fixed Arm Mount Assembly	1
2		Flex Arm Assembly (Refer to "Flex Arm Assy- *Track, Wall, & Cabinet Mounted Lights*")	Ref
3		Lighthead Assembly (Refer to "Lighthead Assembly")	Ref
4		Cabinet Mount Assembly (Refer to "Cabinet Mount Assembly")	Ref
5		Wall Mount Assembly (Refer to "Wall Mount Assembly")	Ref

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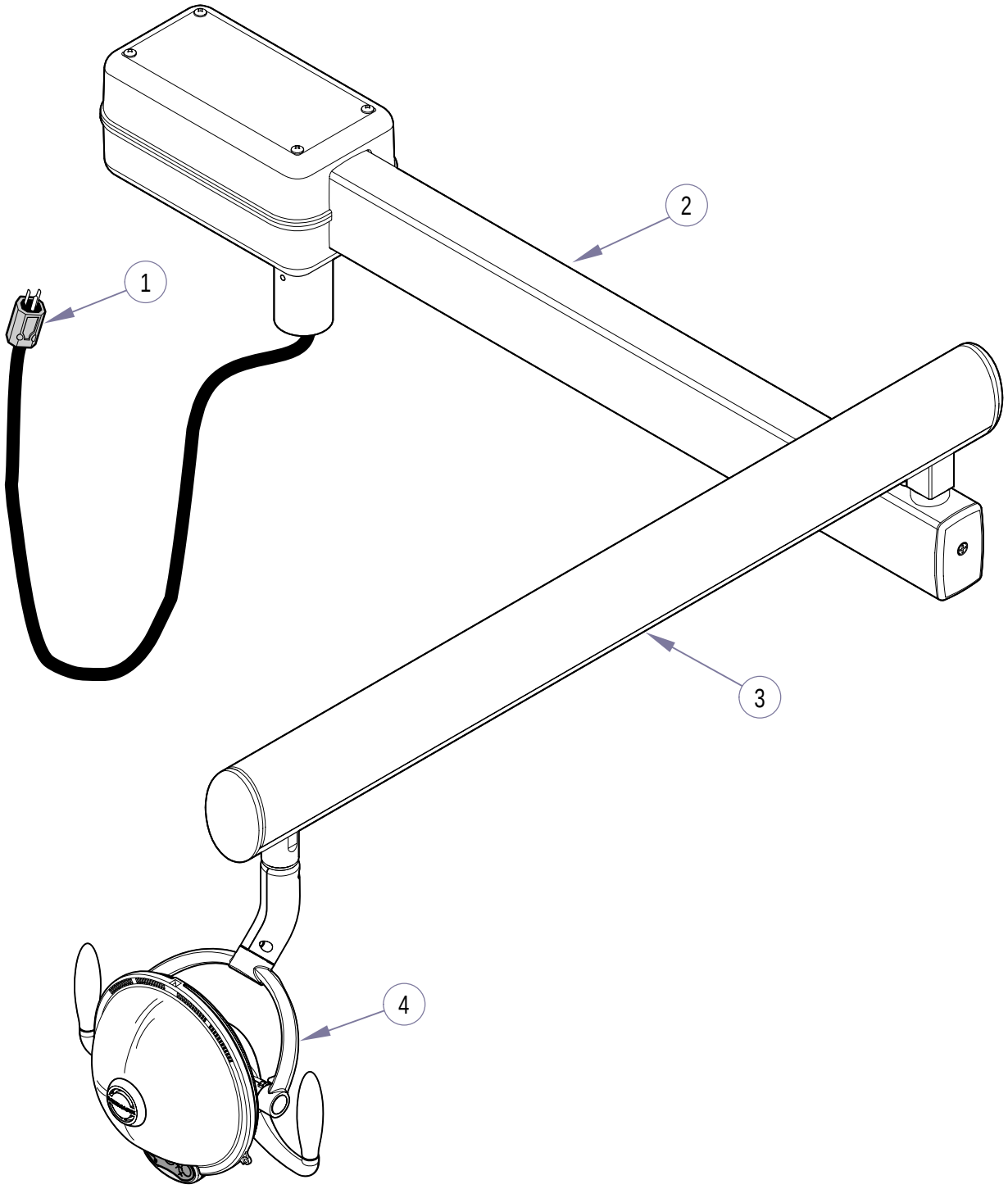
Universal Mounted Light Pictoral Index



KA993501i

Item	Part No.	Description	Quantity
	153639-001	Universal Light Assembly (Includes Items 1 thru 4)	1
1		120 V Plug (Refer to "Flex Arm / Light Head Assy - *Universal Mtd. Light*")	Ref
2		Fixed Arm Assembly (Refer to "Fixed Arm Assy- *Universal Mtd. Light*")	Ref
3	•	• Flex Arm Assy. (Refer to "Flex Arm Assy *Universal Mtd. Lights*")	Ref
4	•	• Light Head Assembly (Refer to "Lighthead Assembly")	Ref

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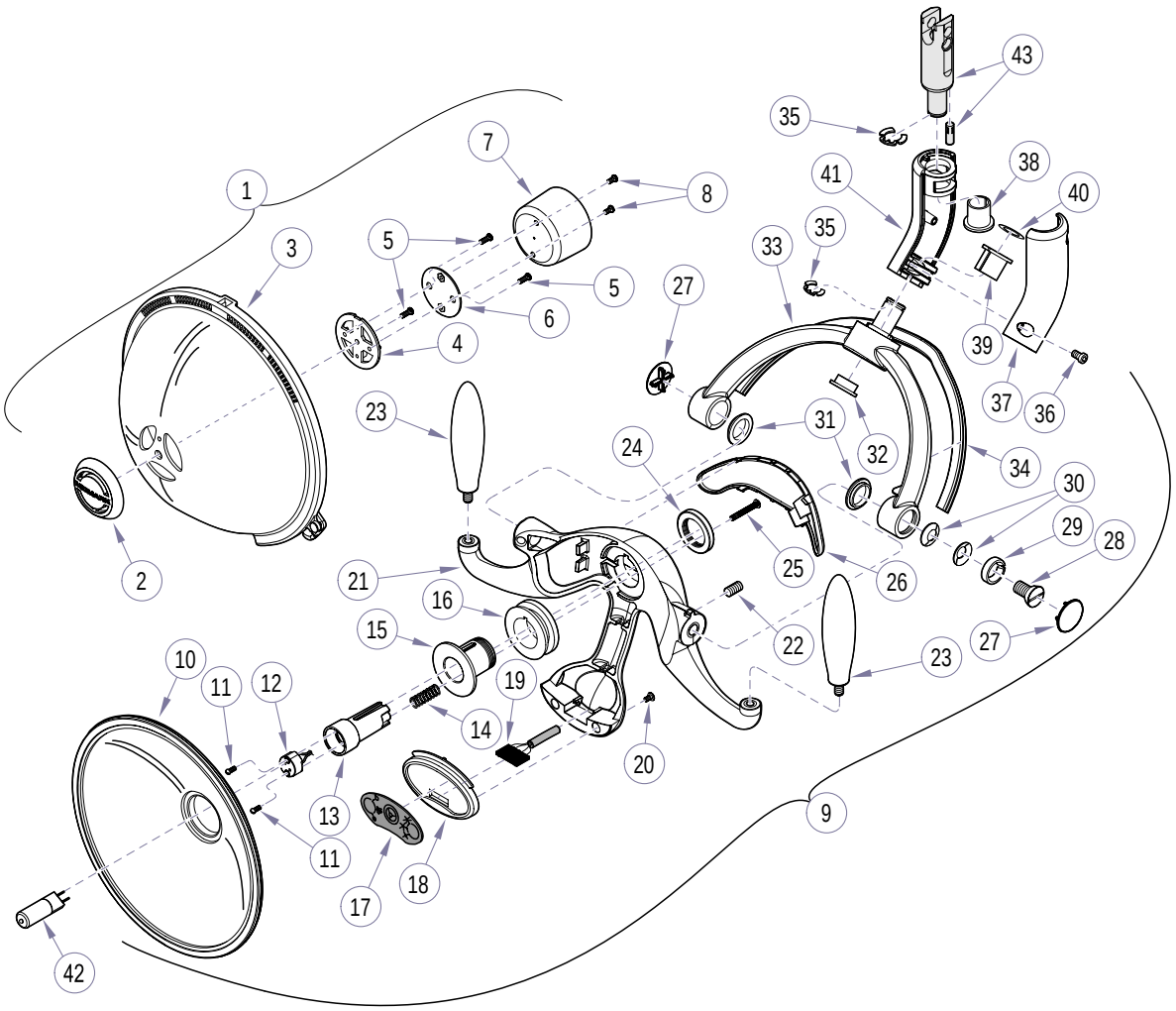
Lighthead Assembly



KA942500i

Item	Part No.	Description	Quantity
	029-2383-00	Light Head Assembly (Includes items 1 thru 41)	1
1	• 029-2378-00	• Reflector Shield Assembly (Includes Items 2 thru 8)	1
2	• • 123035	• • Reflector Shield Cap	1
3	• • 029-2521-00	• • Shield/Latch Assembly	1
4	• • 053-1087-00	• • Insulator Assembly	1
5	• • 042-0168-02	• • Screw	3
6	• • 029-2485-00	• • Shade Insulator	1
7	• • 123036-0	• • Anodized Shade	1
8	• • 040-0006-53	• • Screw	2
9	• 029-2382-00	• Reflector Assembly (Includes Items 10 thru 34)	1
10	• • 122993	• • Reflector	1
11	• • 122806	• • Screw	2
12	• • 002-0671-00	• • Light Socket Kit (Includes two, 117244 Scotch-Lok Connectors	1
13	• • 123016-6	• • Machined Socket Housing	1
14	• • 025-0067-00	• • Spring	1
15	• • 123017-2	• • Anodized Focus Housing	1
16	• • 123013	• • Reflector Grommet	1
17	• • 002-0673-00	• • Membrane Switch Panel (Includes Item 18)	1
18	• • •	• • • Control Bezel	1
19	• • 015-1380-00	• • Switch Panel Harness	1
20	• • 042-0168-04	• • Screw	2
21	• • 123019	• • Reflector Mount	1
22	• • 040-0008-47	• • Screw	1
23	• • 029-2658-00	• • Handle (apply Loctite #042-0025-00)	2
24	• • 123018	• • Focus Housing Nut	1
25	• • 040-0010-84	• • Screw	1
26	• • 123021	• • Focus Cap	1
27	• • 053-1063-00	• • Yoke Cap	2
28	• • 057-0532-00	• • Adjustment Screw	1
29	• • 053-1049-00	• • Drag Bushing	1
30	• • 525-0063-00	• • Belleville Spring Washer	2
31	• • 053-1048-00	• • Shoulder Washer	2
32	• • 053-1347-50	• •Hole Plug	1
33	• • 020-0221-50	• • Dental Light Yoke	1
34	• • 123023	• • Yoke Wire Cap	1
35	• 042-0065-07	• Klipring	1
36	• 040-0008-83	• Screw	2
37	• 020-0195-50	• R. H. Light Elbow Half	1
38	• 016-0833-00	• Flange Bearing	1
39	• 016-0833-01	• Flange Bearing	1
40	• 113451	• Washer	1
41	• 020-0222-50	• L. H. Light Elbow Half	1
42	121720	Bulb	1
43		Refer to *Flex Arm Assembly*- for mounting style)	Ref

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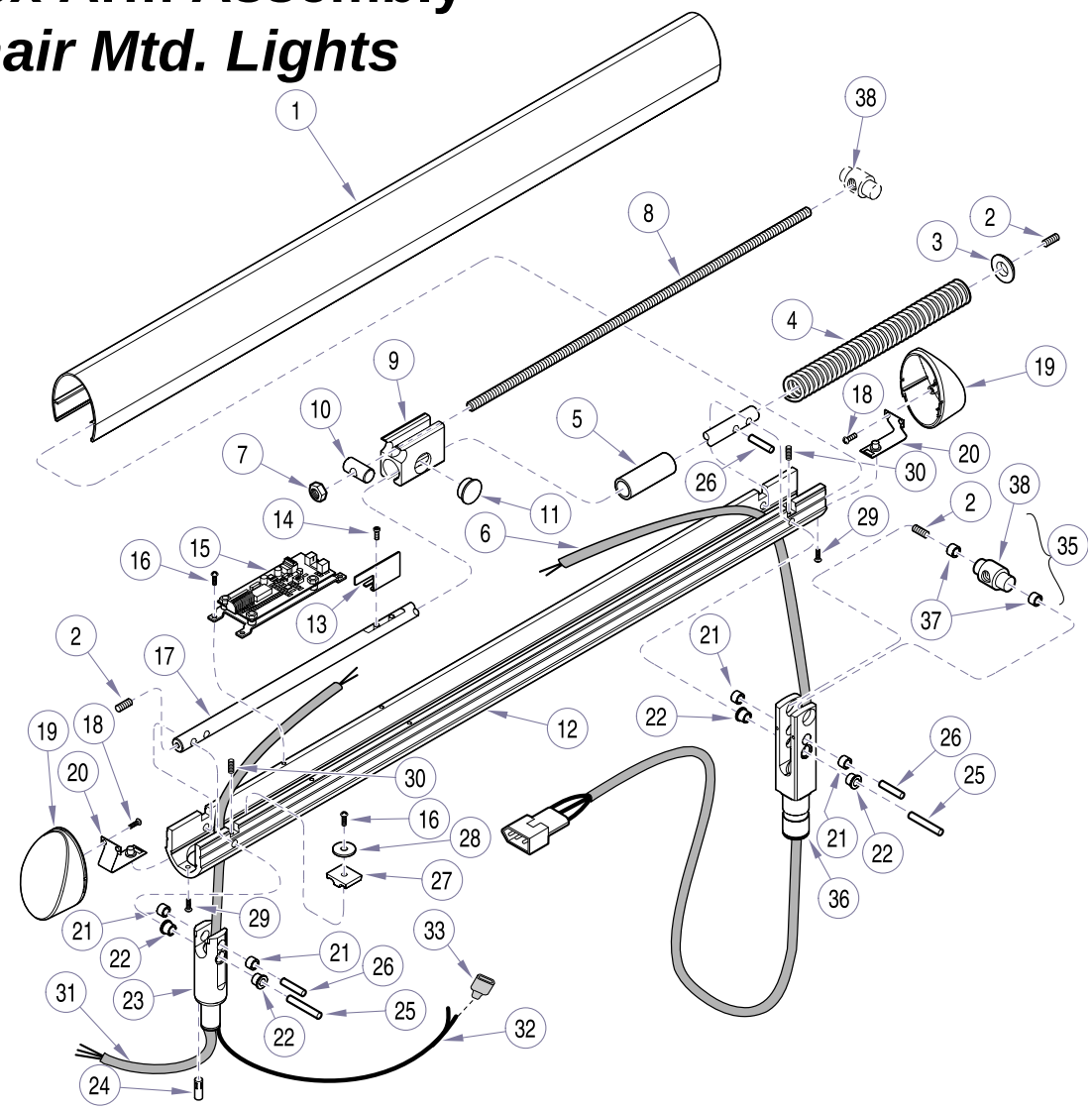
Flex Arm Assembly - *Chair Mtd. Lights*



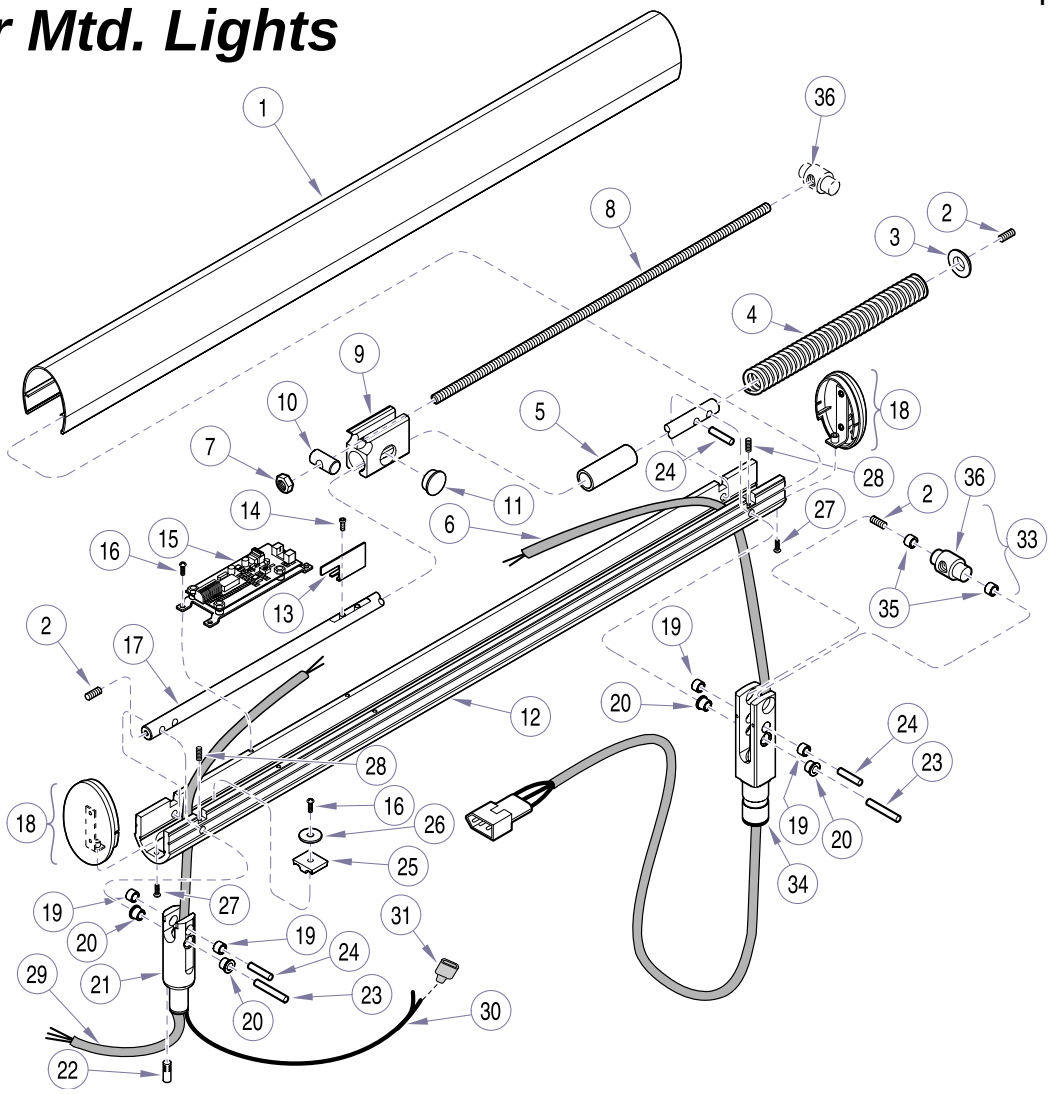
KA942400

Used on Units with Serial Numbers NW1000 thru NW1362

Item	Part No.	Description	Quantity
	029-2396-00	Flex Arm Assembly (Includes Items 1 thru 35)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121717	• Spring Retainer Block Bushing	1
6	• 015-1522-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 121741	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	2
18	• 042-0168-02	• Screw	4
19	• 053-1064-00	• Flex Arm End Cap	2
20	• 029-2628-00	• Bracket Assembly	2
21	• 121714	• Sleeve Bearing	4
22	• 121716	• Flange Bearing	4
23	• 057-0544-50	• Light Head End Flex Arm Post	1
24	• 042-0009-15	• Groove Pin	1
25	• 121728	• Dowel Pin	2
26	• 121727	• Dowel Pin	3
27	• 053-1127-00	• Flex Arm Wire Clamp	2
28	• 045-0001-21	• Washer	2
29	• 040-0006-92	• Screw	2
30	• 121747	• Set Screw	2
31	• 015-1380-00	• Light Head Harness	1
32	• 015-1465-00	• Bulb Socket Harness	1
33	• 117244	• Connector	2
34	• 115896	• Cable Tie (not shown)	2
35	• 153350-01	• Pin Post Bearing Assembly (includes items 36 thru 38	1
36	• • 051-0929-50	• • Flex Arm End Post	1
37	• • 122997	• • DU Bearing	2
38	• • 122995	• • Spring Rod Pin	1
39		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

Always Specify Model & Serial Number

Flex Arm Assembly - *Chair Mtd. Lights*



KA992600

Used on Units with Serial Numbers NW1363 thru NW1417

Item	Part No.	Description	Quantity
	029-2396-00	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121738	• Spring Retainer Block Bushing	1
6	• 015-1522-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 121741	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	1
18	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
19	• 121714	• Sleeve Bearing	4
20	• 121716	• Flange Bearing	4
21	• 057-0544-50	• Light Head End Flex Arm Post (Chair & Universal)	1
22	• 042-0009-15	• Groove Pin	1
23	• 121728	• Dowel Pin	2
24	• 121727	• Dowel Pin	3
25	• 053-1127-00	• Flex Arm Wire Clamp	2
26	• 045-0001-21	• Washer	2
27	• 040-0006-92	• Screw	2
28	• 121747	• Set Screw	2
29	• 015-1380-00	• Light Head Harness	1
30	• 015-1465-00	• Bulb Socket Harness	1
31	• 117244	• Connector	2
32	• 115896	• Cable Tie (not shown)	2
33	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
34	• • 051-0929-50	• • Flex Arm End Post	1
35	• • 122997	• • DU Bearing	2
36	• • 122995	• • Spring Rod Pin	1
37		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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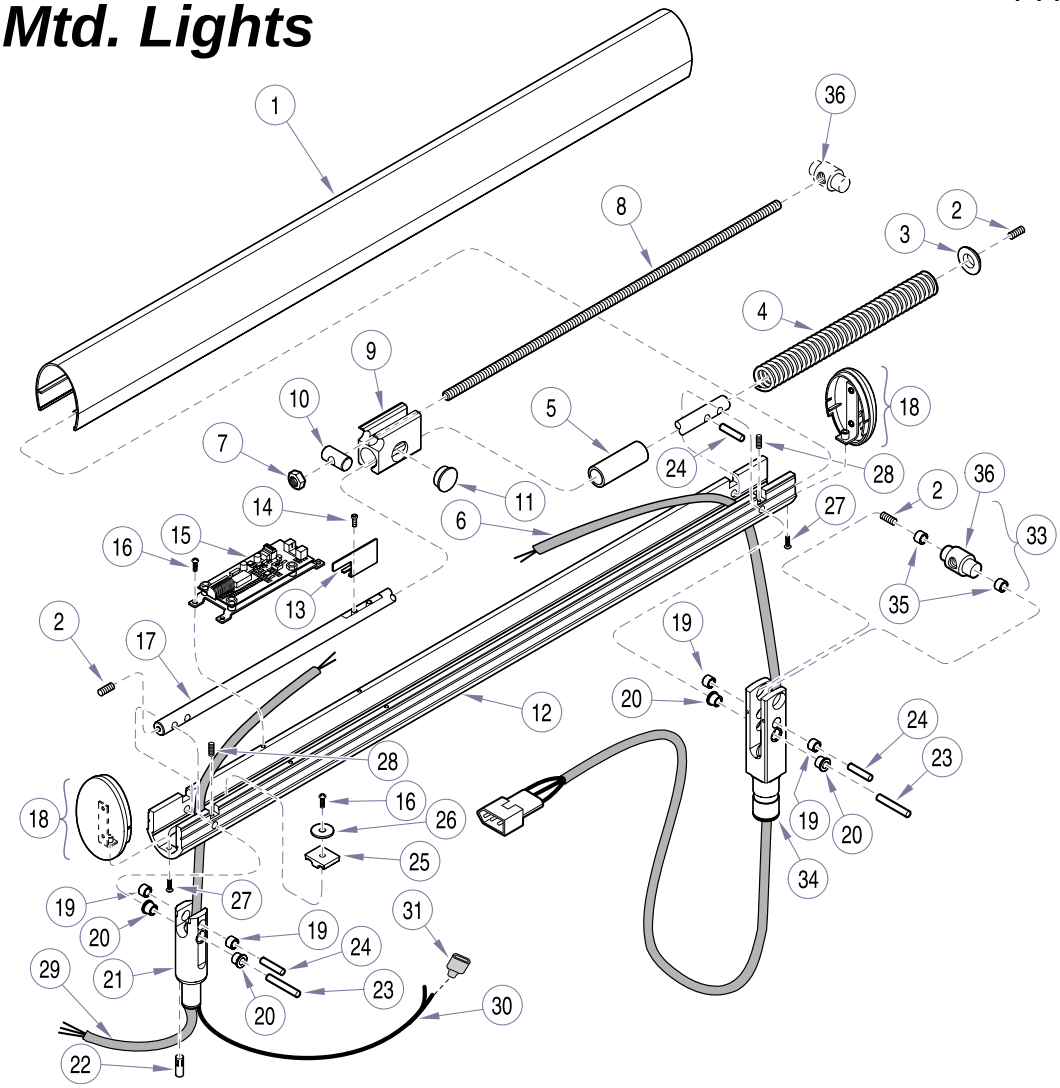
Flex Arm Assembly - *Chair Mtd. Lights*



KA992600i

Used on Units with Serial Numbers NW1418 thru NW2574 & RE1000 thru RE1402

Item	Part No.	Description	Quantity
	029-2396-00	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121717	• Spring Retainer Block Bushing	1
6	• 015-1522-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 051-0981-00	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	1
18	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
19	• 121714	• Sleeve Bearing	4
20	• 121716	• Flange Bearing	4
21	• 057-0544-50	• Light Head End Flex Arm Post (Chair & Universal)	1
22	• 042-0009-15	• Groove Pin	1
23	• 121728	• Dowel Pin	2
24	• 121727	• Dowel Pin	3
25	• 053-1127-00	• Flex Arm Wire Clamp	2
26	• 045-0001-21	• Washer	2
27	• 040-0006-92	• Screw	2
28	• 121747	• Set Screw	2
29	• 015-1380-00	• Light Head Harness	1
30	• 015-1465-00	• Bulb Socket Harness	1
31	• 117244	• Connector	2
32	• 115896	• Cable Tie (not shown)	2
33	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
34	• • 051-0929-50	• • Flex Arm End Post	1
35	• • 122997	• • DU Bearing	2
36	• • 122995	• • Spring Rod Pin	1
37		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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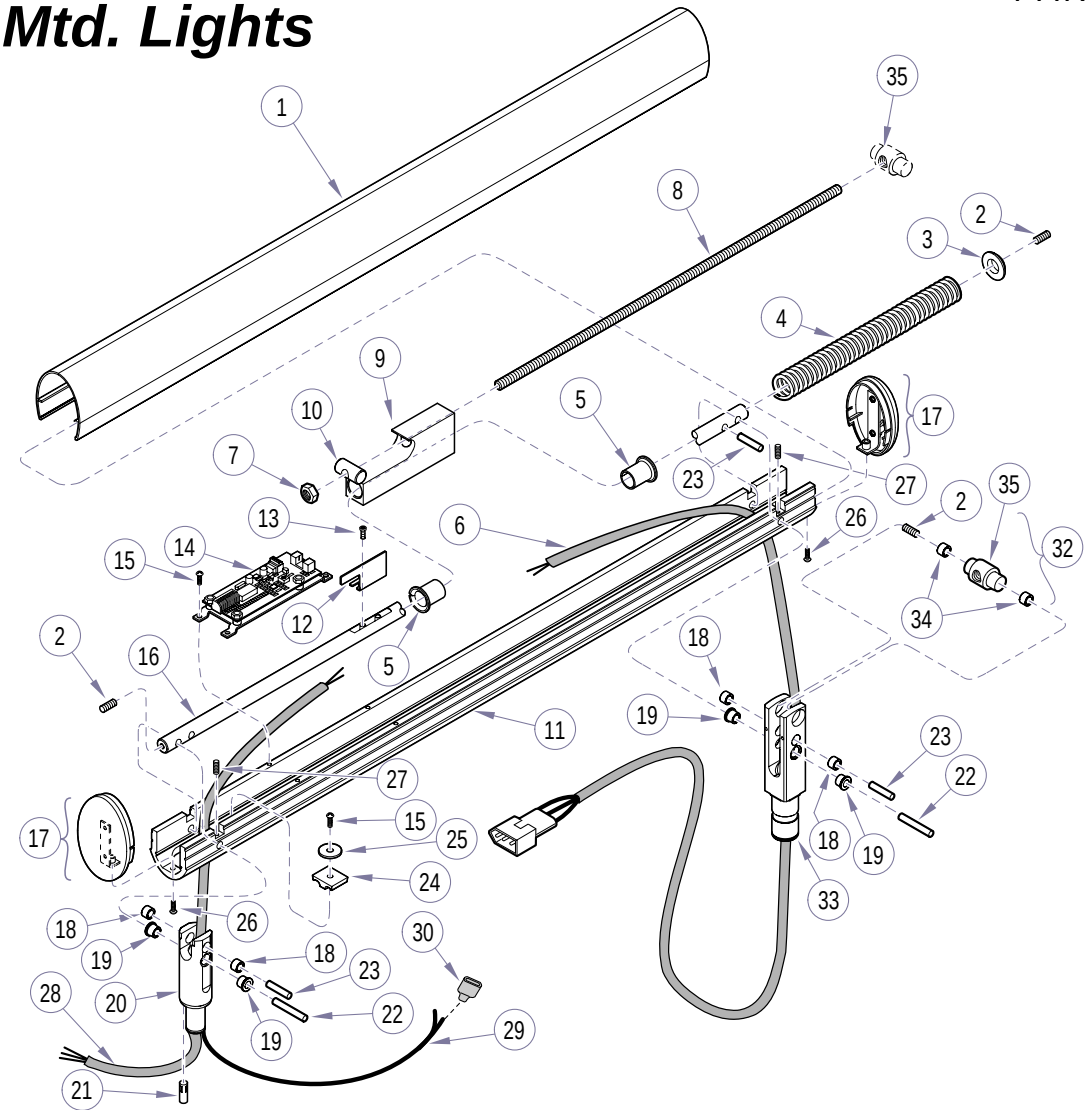
Flex Arm Assembly - *Chair Mtd. Lights*



KA992601i

Used on Units with Serial Numbers NW2575 & RE1403 thru Present

Item	Part No.	Description	Quantity
	029-2396-00	Flex Arm Assembly (Includes Items 1 thru 35)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 016-0441-01	• Flanged DU Bearing	2
6	• 015-1522-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 051-1056-00	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 021-0033-50	• Machined Light Arm Channel	1
12	• 050-4865-00	• Blade	1
13	• 105480	• Screw	2
14	• 015-1379-00	• Light PC Board	1
15	• 040-0006-99	• Screw	6
16	• 057-0596-00	• Flex Arm Shaft	1
17	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
18	• 121714	• Sleeve Bearing	4
19	• 121716	• Flange Bearing	4
20	• 057-0544-50	• Light Head End Flex Arm Post (Chair & Universal)	1
21	• 042-0009-15	• Groove Pin	1
22	• 121728	• Dowel Pin	2
23	• 121727	• Dowel Pin	3
24	• 053-1127-00	• Flex Arm Wire Clamp	2
25	• 045-0001-21	• Washer	2
26	• 040-0006-92	• Screw	2
27	• 121747	• Set Screw	2
28	• 015-1380-00	• Light Head Harness	1
29	• 015-1465-00	• Bulb Socket Harness	1
30	• 117244	• Connector	2
31	• 115896	• Cable Tie (not shown)	2
32	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
33	• • 051-0929-50	• • Flex Arm End Post	1
34	• • 122997	• • DU Bearing	2
35	• • 122995	• • Spring Rod Pin	1
36		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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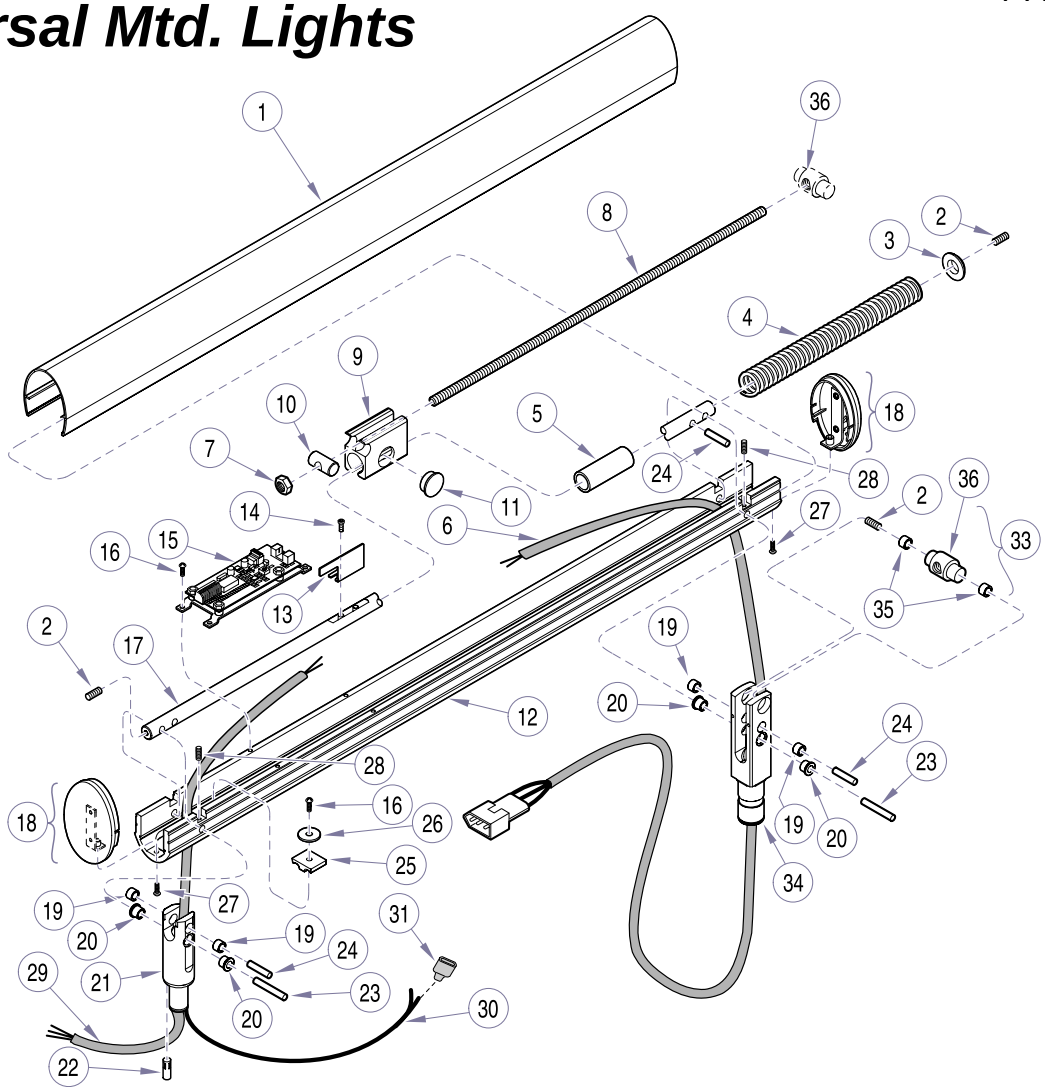
Flex Arm Assembly - *Universal Mtd. Lights*



KA992600i

Used on Units with Serial Numbers PV1000 thru PV1436

Item	Part No.	Description	Quantity
	029-2396-01	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121717	• Spring Retainer Block Bushing	1
6	• 015-1521-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 051-0981-00	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	1
18	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
19	• 121714	• Sleeve Bearing	4
20	• 121716	• Flange Bearing	4
21	• 057-0544-50	• Light Head End Flex Arm Post (Chair & Universal)	1
22	• 042-0009-15	• Groove Pin	1
23	• 121728	• Dowel Pin	2
24	• 121727	• Dowel Pin	3
25	• 053-1127-00	• Flex Arm Wire Clamp	2
26	• 045-0001-21	• Washer	2
27	• 040-0006-92	• Screw	2
28	• 121747	• Set Screw	2
29	• 015-1380-00	• Light Head Harness	1
30	• 015-1465-00	• Bulb Socket Harness	1
31	• 117244	• Connector	2
32	• 115896	• Cable Tie (not shown)	2
33	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
34	• • 051-0929-50	• • Flex Arm End Post	1
35	• • 122997	• • DU Bearing	2
36	• • 122995	• • Spring Rod Pin	1
37		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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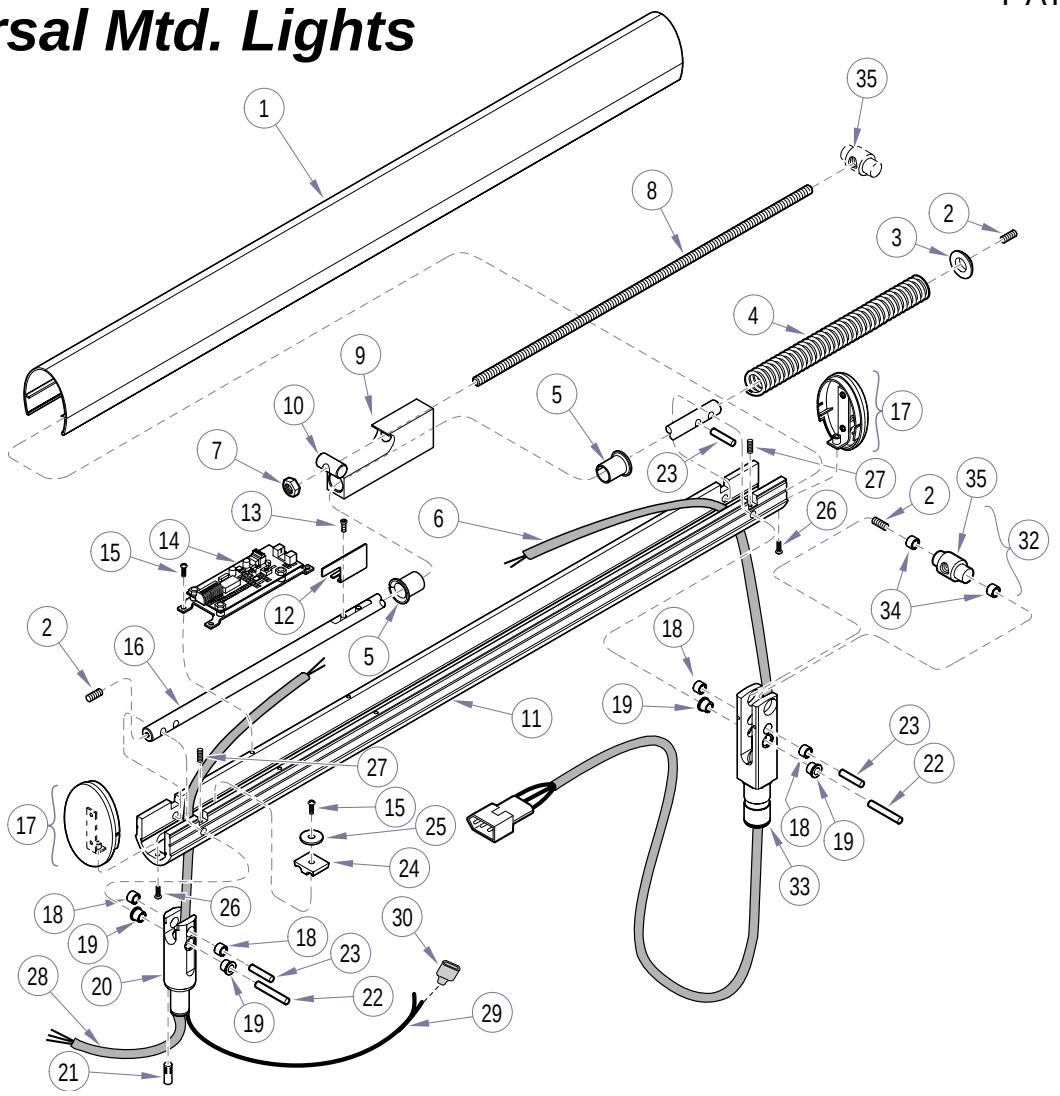
Flex Arm Assembly - *Universal Mtd. Lights*



KA992601i

Used on Units with Serial Numbers PV1437 thru Present

Item	Part No.	Description	Quantity
	029-2396-01	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121717	• Spring Retainer Block Bushing	1
6	• 015-1521-00	• Curved Light Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 051-0981-00	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	1
18	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
19	• 121714	• Sleeve Bearing	4
20	• 121716	• Flange Bearing	4
21	• 057-0544-50	• Light Head End Flex Arm Post (Chair & Universal)	1
22	• 042-0009-15	• Groove Pin	1
23	• 121728	• Dowel Pin	2
24	• 121727	• Dowel Pin	3
25	• 053-1127-00	• Flex Arm Wire Clamp	2
26	• 045-0001-21	• Washer	2
27	• 040-0006-92	• Screw	2
28	• 121747	• Set Screw	2
29	• 015-1380-00	• Light Head Harness	1
30	• 015-1465-00	• Bulb Socket Harness	1
31	• 117244	• Connector	2
32	• 115896	• Cable Tie (not shown)	2
33	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
34	• • 051-0929-50	• • Flex Arm End Post	1
35	• • 122997	• • DU Bearing	2
36	• • 122995	• • Spring Rod Pin	1
37		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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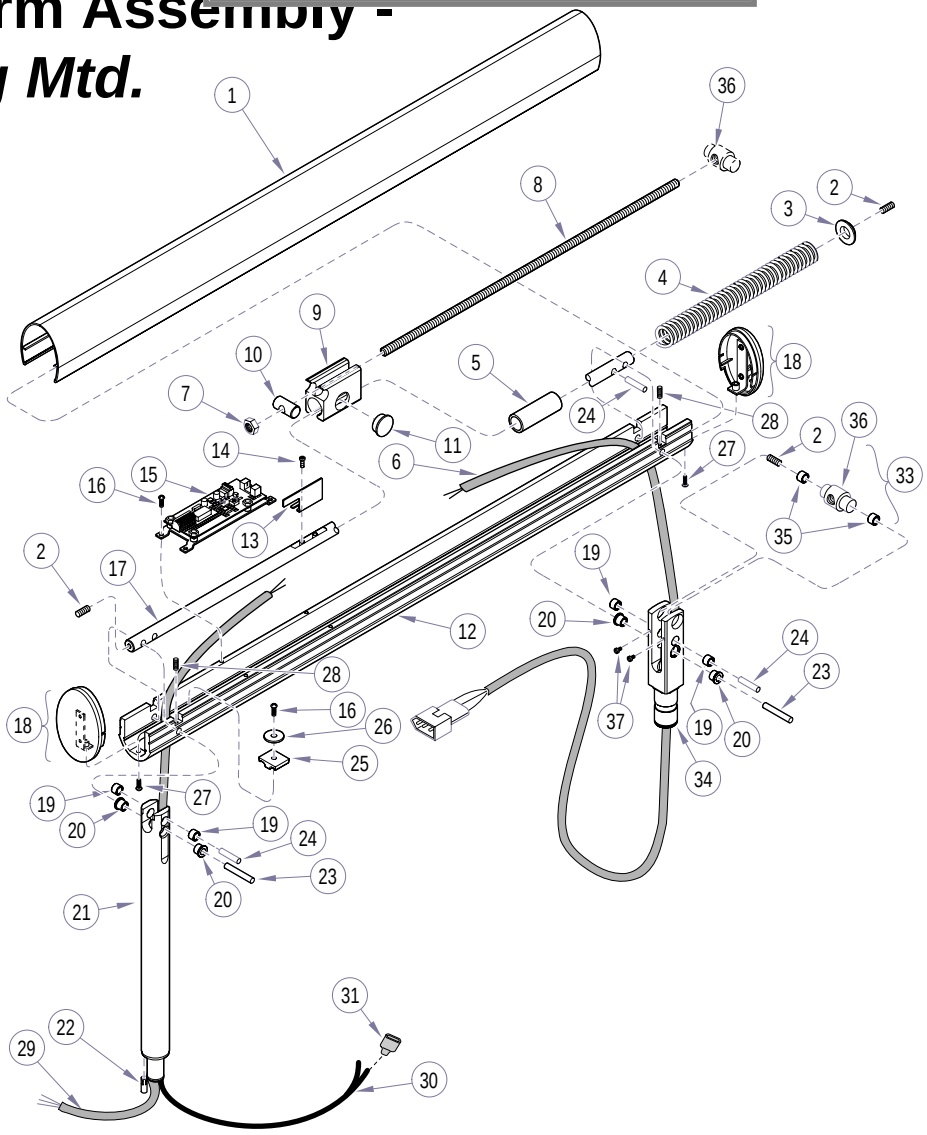

DA113600i

Used on Units with Serial Numbers PS1000 thru PS2218

Item	Part No.	Description	Quantity
	029-2722-00	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 121717	• Spring Retainer Block Bushing	1
6	• 015-1513-00	• Flex/Fixed Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 121735-2	• Spring Retaining Pin	1
11	• 051-0981-00	• Spring Guide Pad	2
12	• 021-0033-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	1
18	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
19	• 121714	• Sleeve Bearing	4
20	• 121716	• Flange Bearing	4
21	• 021-0052-50	• Light Head End Flex Arm Post (Chair & Universal)	1
22	• 042-0009-15	• Groove Pin	1
23	• 121728	• Dowel Pin	2
24	• 121727	• Dowel Pin	3
25	• 053-1127-00	• Flex Arm Wire Clamp	2
26	• 045-0001-21	• Washer	2
27	• 040-0006-92	• Screw	2
28	• 121747	• Set Screw	2
29	• 015-1380-00	• Light Head Harness	1
30	• 015-1465-01	• Lamp Socket to P.C Board Harness	1
31	• 117244	• Connector	2
32	• 115896	• Cable Tie (not shown)	2
33	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
34	• • 051-0929-50	• • Flex Arm End Post	1
35	• • 122997	• • DU Bearing	2
36	• • 122995	• • Spring Rod Pin	1
37	•121982	• Stop Pin	2
38		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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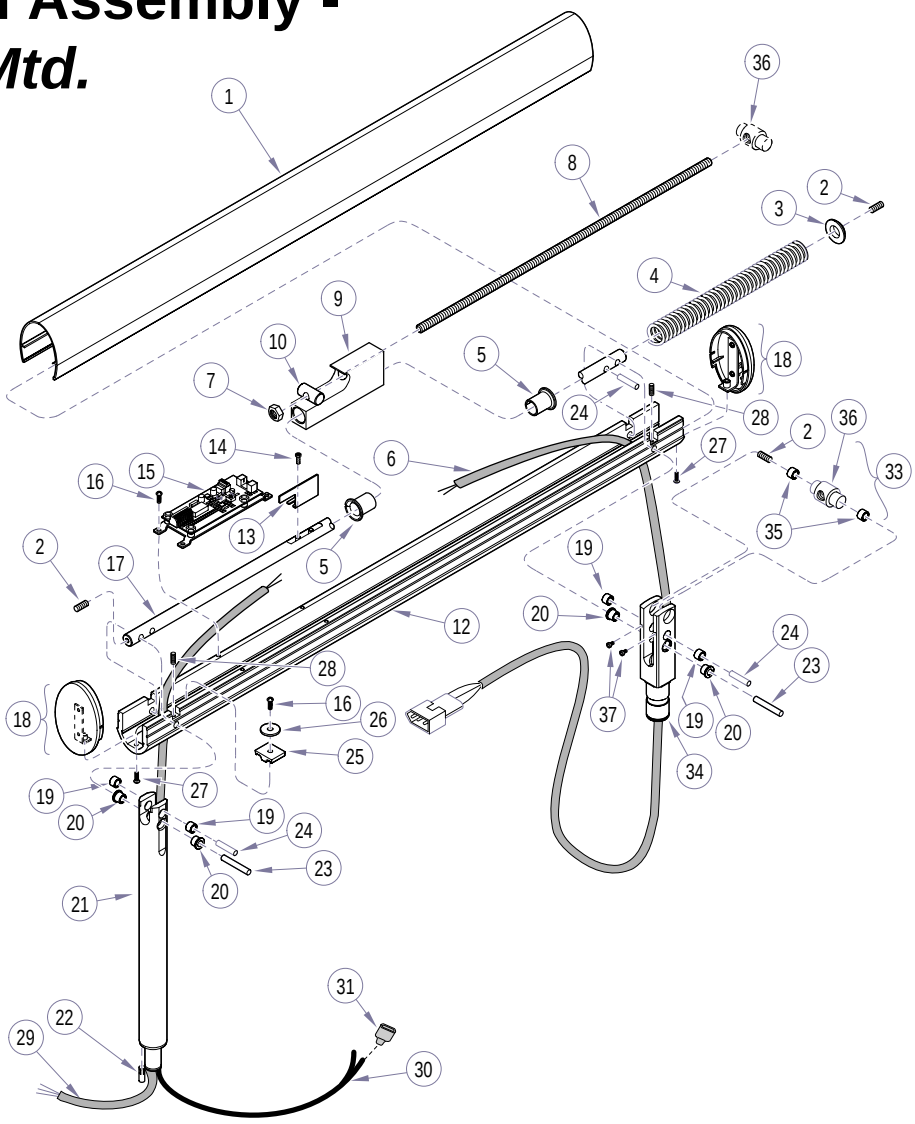

DA113601i

Used on Units with Serial Numbers PS2219 thru Present

Item	Part No.	Description	Quantity
	029-2722-00	Flex Arm Assembly (Includes Items 1 thru 36)	1
1	• 021-0034-50	• Light Arm Cover	1
2	• 110790	• Set Screw	3
3	• 121725-2	• Spring Support Washer	1
4	• 121729	• Compression Spring	1
5	• 016-0441-01	• Flanged DU Bearing	2
6	• 015-1513-00	• Flex/Fixed Arm Harness	1
7	• C1269	• Nut	1
8	• 121742	• Threaded Rod	1
9	• 121737-2	• Spring Retainer Block	1
10	• 051-1056-00	• Spring Retaining Pin	1
11	• 021-0033-50	• Machined Light Arm Channel	1
12	• 050-4865-00	• Blade	1
13	• 105480	• Screw	2
14	• 015-1379-00	• Light PC Board	1
15	• 040-0006-99	• Screw	6
16	• 057-0596-00	• Flex Arm Shaft	1
17	• 029-2662-00	• End Cap Assembly (includes mounting bracket & nutsert)	2
18	• 121714	• Sleeve Bearing	4
19	• 121716	• Flange Bearing	4
20	• 021-0052-50	• Light Head End Flex Arm Post (Chair & Universal)	1
21	• 042-0009-15	• Groove Pin	1
22	• 121728	• Dowel Pin	2
23	• 121727	• Dowel Pin	3
24	• 053-1127-00	• Flex Arm Wire Clamp	2
25	• 045-0001-21	• Washer	2
26	• 040-0006-92	• Screw	2
27	• 121747	• Set Screw	2
28	• 015-1380-00	• Light Head Harness	1
29	• 015-1465-01	• Lamp Socket to P.C Board Harness	1
30	• 117244	• Connector	2
31	• 115896	• Cable Tie (not shown)	2
32	• 153350-01	• Pin Post Bearing Assembly (includes items 34 thru 36	1
33	• • 051-0929-50	• • Flex Arm End Post	1
34	• • 122997	• • DU Bearing	2
35	• • 122995	• • Spring Rod Pin	1
36	•121982	• Stop Pin	2
37		Switch Panel Harness (not shown) (Refer to "Lighthead Assembly")	Ref

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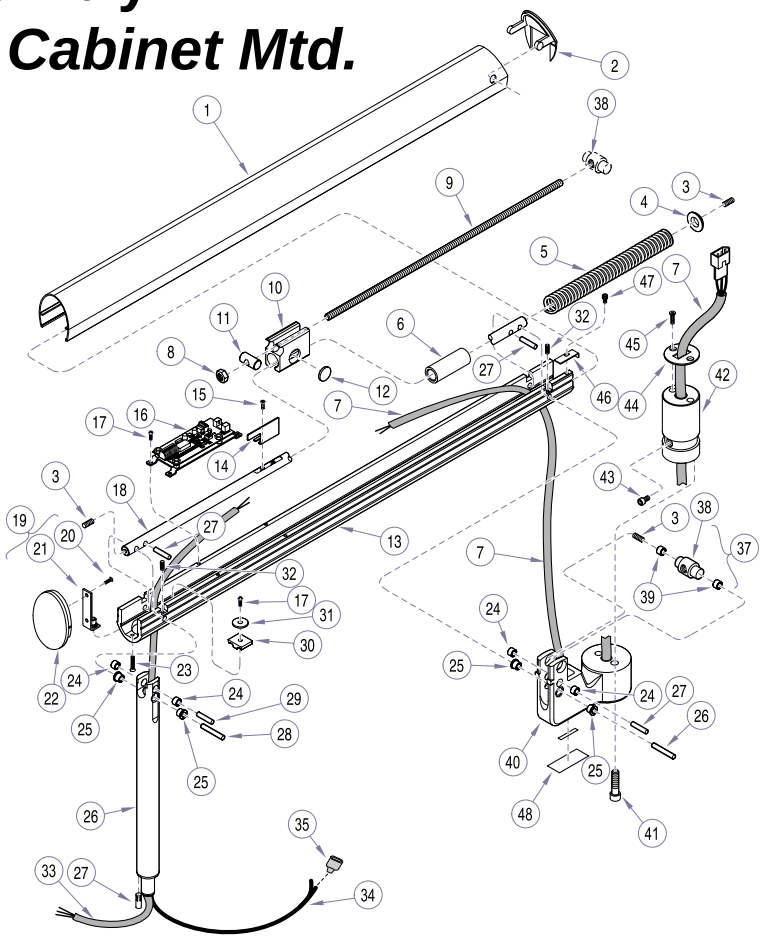

KA986500i

Used on Units with Serial Numbers PT1000 thru PT2618

Item	Part No.	Description	Quantity
	029-2719-00	Flex Arm Assembly (Includes Items 1 thru 37)	1
1	• 021-0054-50	• Light Arm Cover	1
2	• 053-1232-01	• Rear Flex Arm Endcap	1
3	• 110790	• Set Screw	3
4	• 121725-2	• Spring Support Washer	1
5	• 121729	• Compression Spring	1
6	• 121717	• Spring Retainer Block Bushing	1
7	• 015-1520-00	• Curved Light Arm Harness	1
8	• C1269	• Nut	1
9	• 121742	• Threaded Rod	1
10	• 121737-2	• Spring Retainer Block	1
11	• 121735-2	• Spring Retaining Pin	1
12	• 015-0981-00	• Spring Guide Pad	2
13	• 021-0053-50	• Machined Light Arm Channel	1
14	• 050-4865-00	• Blade	1
15	• 105480	• Screw	2
16	• 015-1379-00	• Light PC Board	1
17	• 040-0006-99	• Screw	6
18	• 057-0596-00	• Flex Arm Shaft	2
19	• 029-2662-00	• Flex Arm Endcap Assembly (Includes Items 20 thru 22)	
20	• • 042-0168-02	• • Screw	2
21	• • 029-2628-00	• • Bracket Assembly	1
22	• • 053-1064-00	• • Flex Arm Endcap	1
23	• 040-0006-92	• Screw	1
24	• 121714	• Sleeve Bearing	4
25	• 121716	• Flange Bearing	4
26	• 021-0052-51	• Light Head End Flex Arm Post	1
27	• 042-0009-15	• Dowel Pin	1
28	• 121728	• Dowel Pin	2
29	• 121727	• Dowel Pin	3
30	• 053-1127-00	• Flex Arm Wire Clamp	2
31	• 045-0001-21	• Washer	2
32	• 121747	• Set Screw	2
33	• 015-1380-01	• Light Head Harness	1
34	• 015-1465-01	• Bulb Socket Harness	1
35	• 117244	• Connector	2
36	• 115896	• Cable Tie (Not Shown)	2
37	• 029-2724-00	• Pin Post Bearing Assembly (Includes Items 38 thru 40	1
38	• • 122997	• • DU Bearing	2
39	• • 122995	• • Spring Rod Pin	1
40	• • 020-0266-50	• • Flex Arm End Post	1
41	• 040-0312-29	• Screw (Add Lock Tite 242)	2
42	• 057-0658-00	• Bearing Shaft	1
43	• 040-0010-152	• Screw	1
44	• 050-5131-00	• Connector Disc	1
45	• 121242	• Screw	2
46	• 050-5103-00	• Light Arm Cover Stop	1
47	• 040-0006-74	• Screw	1
48	061-0830-00	Clear Laminate	1
49		Master Label (Not Shown)	1
50		Switch Panel Harness (Refer to "Lighthead Assembly")	Ref

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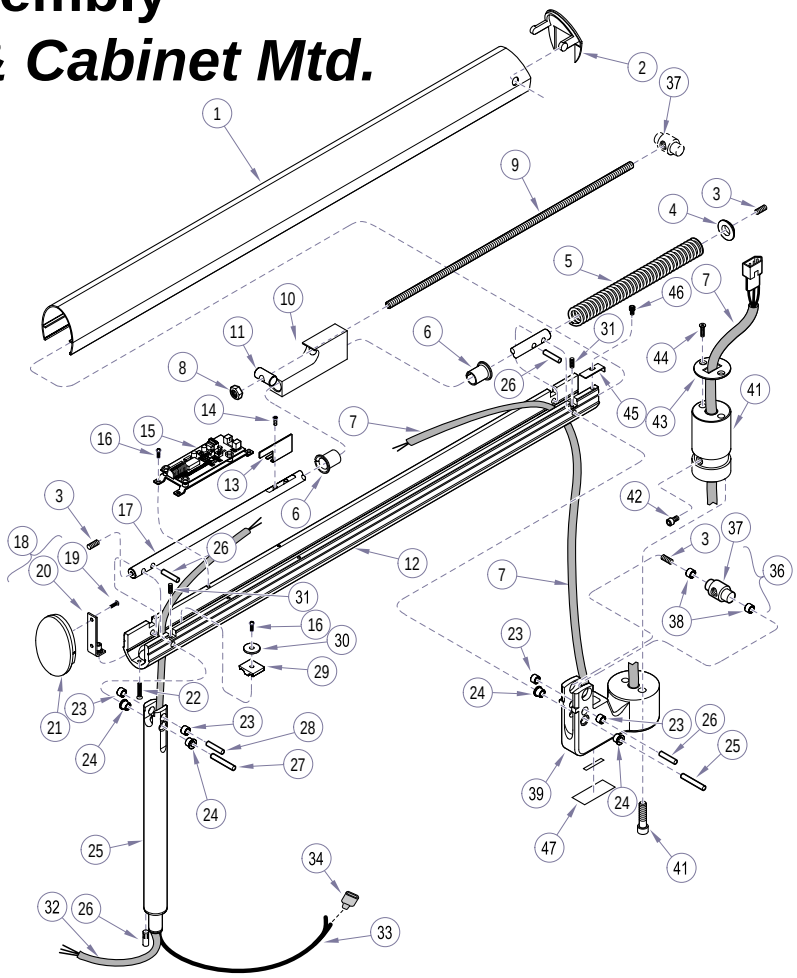
Flex Arm Assembly - *Track, Wall, & Cabinet Mtd. Lights*



KA986501i

Used on Units with Serial Numbers PT2619 thru Present

Item	Part No.	Description	Quantity
	029-2719-00	Flex Arm Assembly (Includes Items 1 thru 37)	1
1	• 021-0054-50	• Light Arm Cover	1
2	• 053-1232-01	• Rear Flex Arm Endcap	1
3	• 110790	• Set Screw	3
4	• 121725-2	• Spring Support Washer	1
5	• 121729	• Compression Spring	1
6	• 016-0441-01	• Flanged DU Bearing	2
7	• 015-1520-00	• Curved Light Arm Harness	1
8	• C1269	• Nut	1
9	• 121742	• Threaded Rod	1
10	• 051-1056-00	• Spring Retainer Block	1
11	• 121735-2	• Spring Retaining Pin	1
12	• 021-0053-50	• Machined Light Arm Channel	1
13	• 050-4865-00	• Blade	1
14	• 105480	• Screw	2
15	• 015-1379-00	• Light PC Board	1
16	• 040-0006-99	• Screw	6
17	• 057-0596-00	• Flex Arm Shaft	2
18	• 029-2662-00	• Flex Arm Endcap Assembly (Includes Items 20 thru 22)	
19	• • 042-0168-02	• • Screw	2
20	• • 029-2628-00	• • Bracket Assembly	1
21	• • 053-1064-00	• • Flex Arm Endcap	1
22	• 040-0006-92	• Screw	1
23	• 121714	• Sleeve Bearing	4
24	• 121716	• Flange Bearing	4
25	• 021-0052-51	• Light Head End Flex Arm Post	1
26	• 042-0009-15	• Dowel Pin	1
27	• 121728	• Dowel Pin	2
28	• 121727	• Dowel Pin	3
29	• 053-1127-00	• Flex Arm Wire Clamp	2
30	• 045-0001-21	• Washer	2
31	• 121747	• Set Screw	2
32	• 015-1380-01	• Light Head Harness	1
33	• 015-1465-01	• Bulb Socket Harness	1
34	• 117244	• Connector	2
35	• 115896	• Cable Tie (Not Shown)	2
36	• 029-2724-00	• Pin Post Bearing Assembly (Includes Items 38 thru 40	1
37	• • 122997	• • DU Bearing	2
38	• • 122995	• • Spring Rod Pin	1
39	• • 020-0266-50	• • Flex Arm End Post	1
40	• 040-0312-29	• Screw (Add Lock Tite 242)	2
41	• 057-0658-00	• Bearing Shaft	1
42	• 040-0010-152	• Screw	1
43	• 050-5131-00	• Connector Disc	1
44	• 121242	• Screw	2
45	• 050-5103-00	• Light Arm Cover Stop	1
46	• 040-0006-74	• Screw	1
47	061-0830-00	Clear Laminate	1
48		Master Label (Not Shown)	1
49		Switch Panel Harness (Refer to "Lighthead Assembly")	Ref

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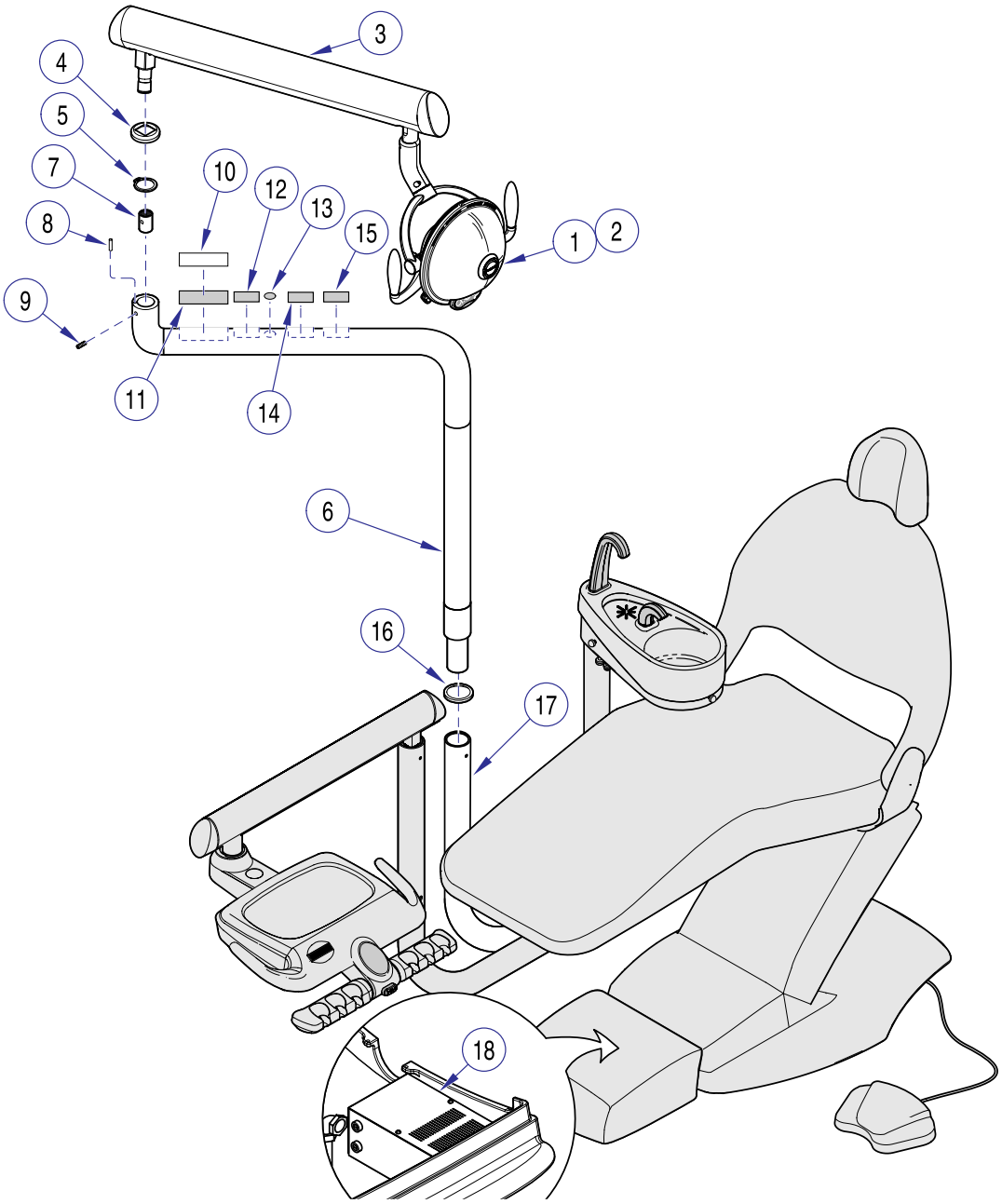
L/R Light Mounting Components



KA963001i

Item	Part No.	Description	Qty
	153584-001	L/R Mounted Dental Light Assembly (Includes Items 1 thru 17)	1
1	•	• Light Head Assembly (Refer to "Lighthead Assembly")	Ref
2	• 121720	• Dental Light Lamp (Not Shown)	1
3	•	• Flex Arm Assy. (Refer to "Flex Arm Assy - *Chair Mtd Lights.*")	Ref
4	• 053-1223-00	• Cover Washer	1
5	• 121677-2	• Stop Washer	1
6	• 029-2620-00	• Curved Arm Assy (Incl. item 7)	1
7	• • 122454-6	• • Bearing	1
8	• 122348	• Stop Pin	1
9	• 122350	• Set Screw	1
10	• 061-0666-00	• Clear Laminate (To Cover S/N Label)	1
11	•	• Serial Number Label	1
12	• 061-0735-00	• ETL Label	1
13	• 061-0652-00	• Type B Label	1
14	• 061-0665-00	• CE Label	1
15	• 061-0781-00	• CE Representative Label	1
16	• 053-1151-00	• Unit Arm Bearing Washer	1
17	•	• Refer to "L/R Lower Arm Assembly")	1
18		Refer to "Power Supply Assembly"	Ref

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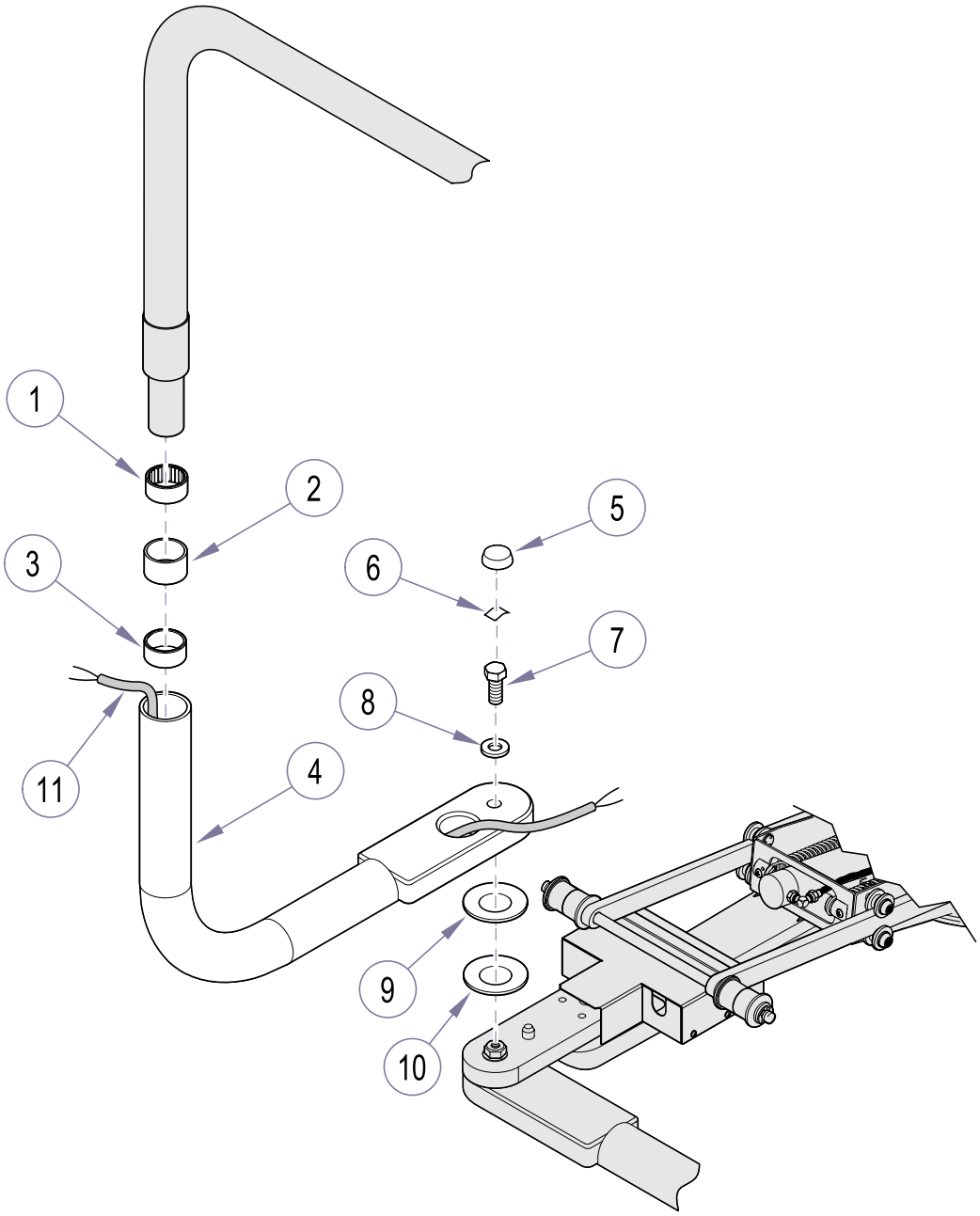
L/R Lower Arm Assembly



KA951600i

Used on units with Serial Numbers NW-1000 thru NW-1361

Item	Part No.	Description	Quantity
	002-0737-00	**LR Light Lower Arm Assembly** *(includes items 1 thru 11)*	
1	• 016-0856-01	• Needle Bearing	1
2	• 052-0373-00	• Bearing Spacer	1
3	• 016-0149-19	• Sleeve Bearing	1
4	• n/a	• LR Light Lower Arm *(must order 002-0737-00)*	1
5	• 122595-01	• Light Bolt Cover	1
6	• 275184	• Double Sided Foam Tape	per ft.
7	• 122551	• Screw	1
8	• 155269	• Washer	1
		Items 9 & 10 are no longer available. Refer to: ***LR Bearing Upgrade Kit for Midmark or Knight Chair***	
9	• n/a	• Washer	1
10	• n/a	• Washer	1
11	• 015-1484-00	• Wire Harness	1

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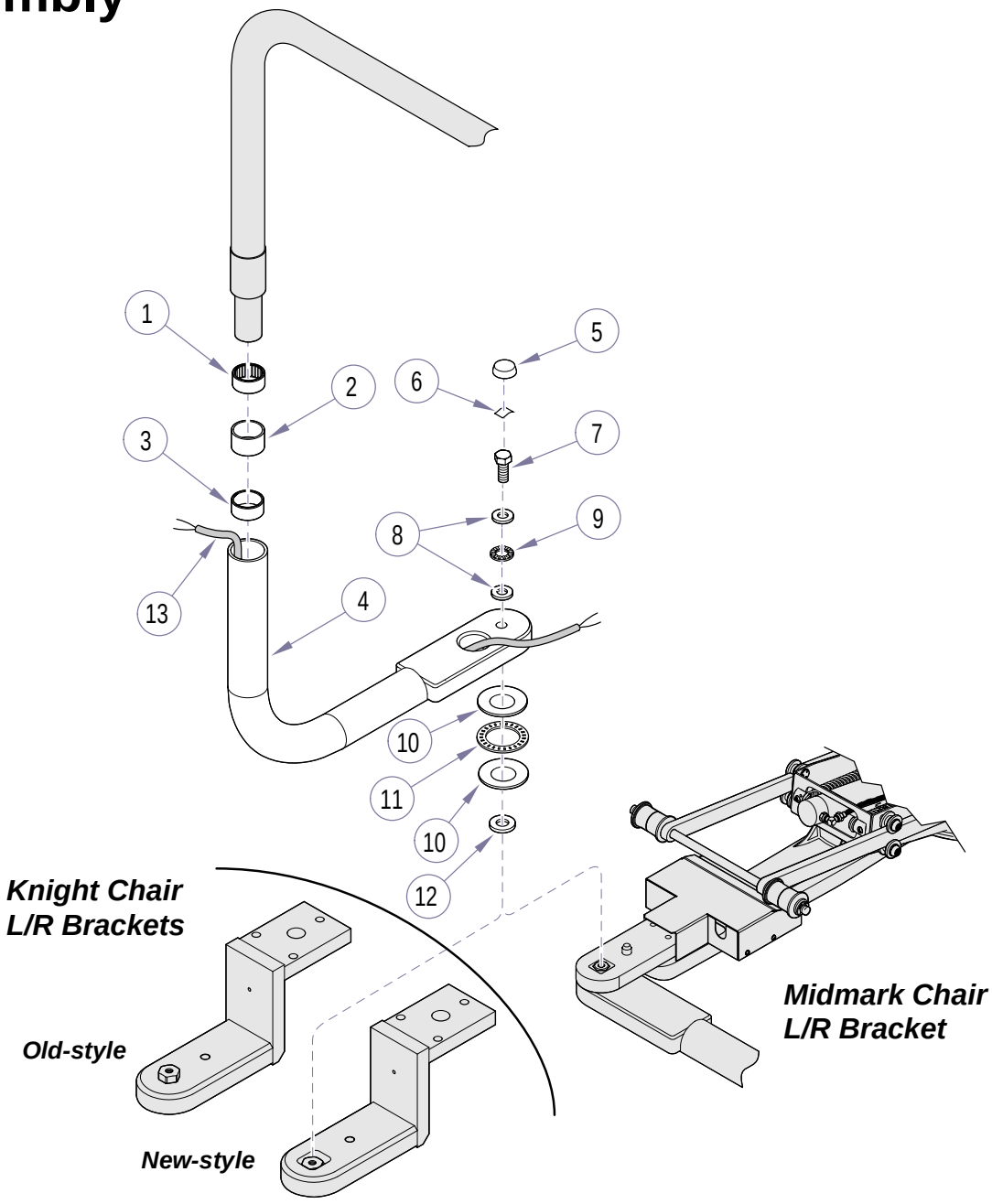
L/R Lower Arm Assembly



KA951601

Used on units with Serial Numbers NW1362 thru NW2378

Item	Part No.	Description	Quantity
		LR Light Lower Arm Assembly	
		(includes items 1 thru 13)	
	002-0737-02	***for Midmark L/R Bracket***	1
	002-0737-02	***for New-style Knight L/R Bracket***	1
	002-0737-01	***for Old-style Knight L/R Bracket***	1
1	• 016-0856-01	• Needle Bearing	1
2	• 052-0373-00	• Bearing Spacer	1
3	• 016-0149-19	• Sleeve Bearing	1
4	• n/a	• LR Light Lower Arm	
		(order LR Light Lower Arm Assy)	1
5	• 122595-01	• Light Bolt Cover	1
6	• 275184	• Double Sided Foam Tape	1”
7	• 040-0500-28	• Screw	1
		Items 8 thru 12 are no longer available. Refer to: ***LR Bearing Upgrade Kit for Midmark or Knight Chair***	
8	• n/a	• Thrust Washer	2
9	• n/a	• Thrust Bearing	1
10	• n/a	• Thrust Washer	2
11	• n/a	• Thrust Bearing	1
12	• n/a	• Bearing Spacer	1
13	• 015-1484-00	• Wire Harness	1

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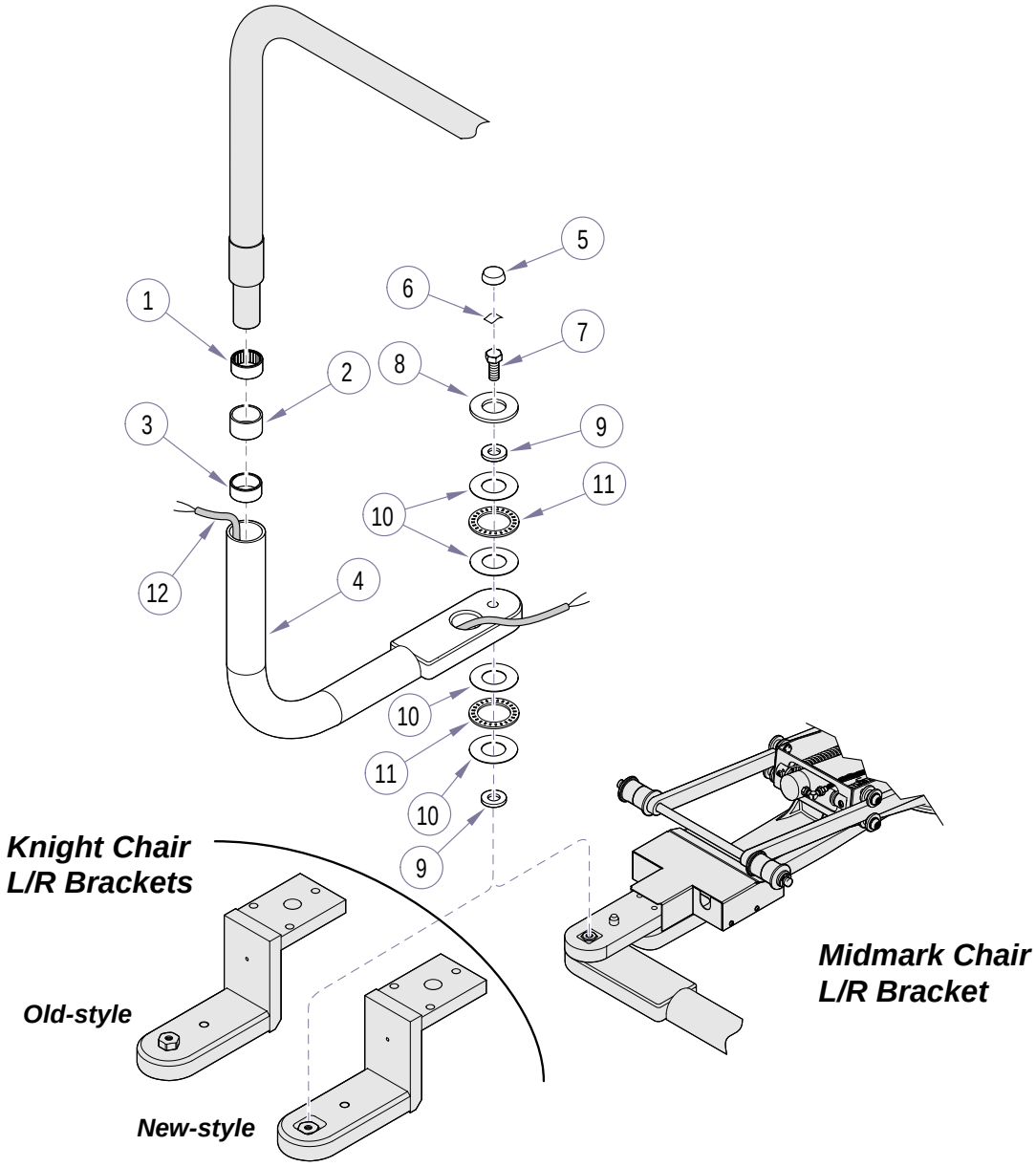
L/R Lower Arm Assembly



KA951602i

Used on units with Serial Numbers NW2379 thru Present

Item	Part No.	Description	Quantity
		LR Light Lower Arm Assembly *(includes items 1 thru 12)*	
	002-0737-02	***for Midmark L/R Bracket***	1
	002-0737-02	***for New-style Knight L/R Bracket***	1
	002-0737-01	***for Old-style Knight L/R Bracket***	1
1	• 016-0856-01	• Needle Bearing	1
2	• 052-0373-00	• Bearing Spacer	1
3	• 016-0149-19	• Sleeve Bearing	1
4	•	• Lower Arm Weldment	
	030-1466-50	*for Midmark L/R Bracket*	1
	030-1466-50	*for New-style Knight L/R Bracket*	1
	n/a	*for Old-style Knight L/R Bracket (must order 002-0737-01)*	1
5	• 053-1360-00	• Bolt Cover	1
6	• 275184	• Double Sided Foam Tape	AR
7	• 040-0500-29	• Screw	1
8	• 050-5259-02	• Bearing Spacer	1
9	• 050-5259-01	• Bearing Spacer	2
10	• 016-0300-03	• Thrust Washer	4
11	• 016-0196-04	• Thrust Bearing	2
12	• 015-1484-00	• Wire Harness	1

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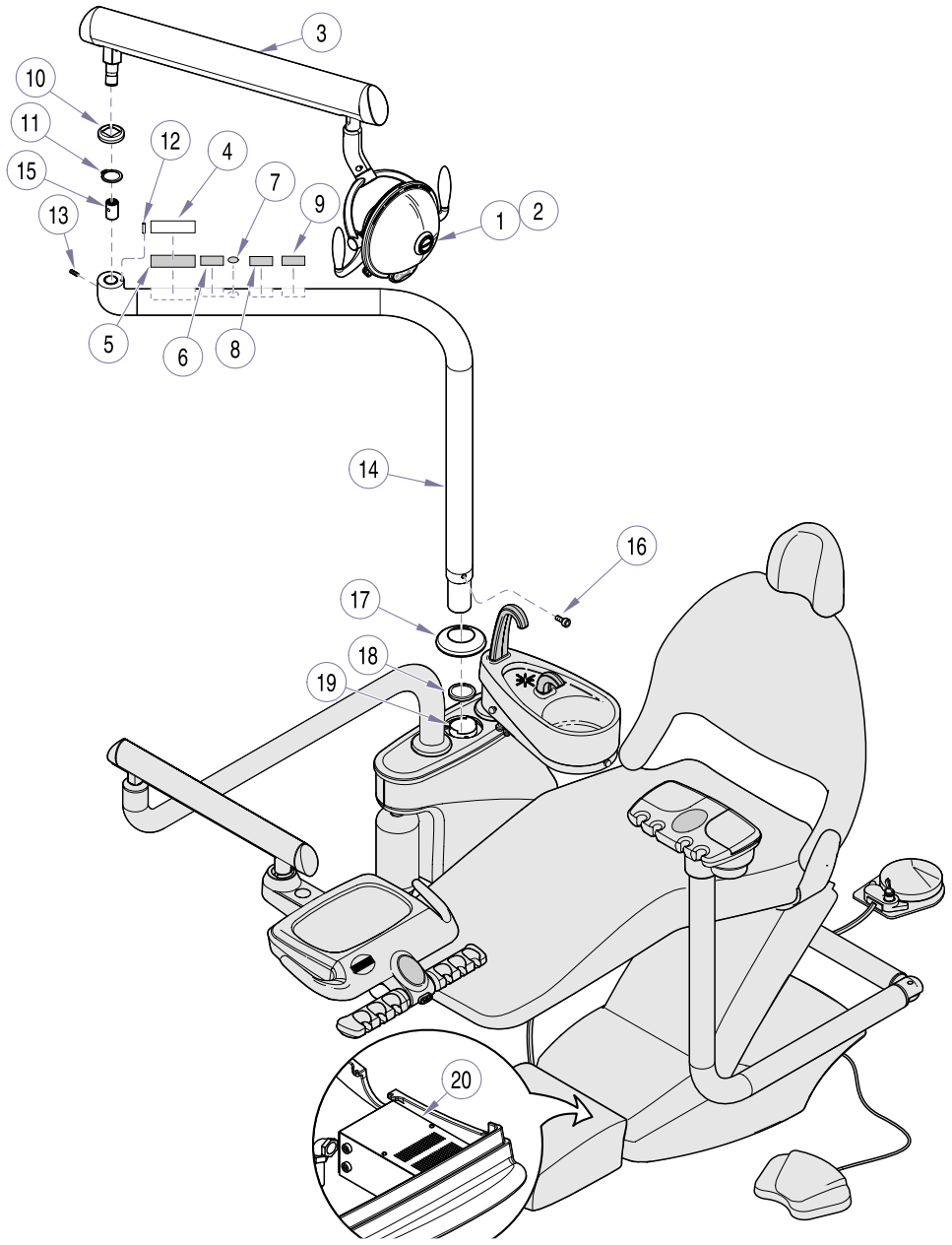
Console Light Mounting Components



KA951801i

Item	Part No.	Description	Qty
	153585-001	Console Mounted Dental Light Assembly (Includes Items 1 thru 19)	1
1	•	• Light Head Assembly (Refer to "Lighthead Assembly")	Ref
2	• 121720	• Dental Light Lamp (Not Shown)	1
3	•	• Refer to "Flex Arm Assy-*Chair Mtd Lights*")	Ref
4	• 061-0666-00	• Clear Laminate (To Cover S/N Label)	1
5	•	• Serial Number Label	1
6	• 061-0735-00	• ETL Label	1
7	• 061-0652-00	• Type B Label	1
8	• 061-0665-00	• CE Label	1
9	• 061-0781-00	• CE Representative Label	1
10	• 053-1223-00	• Cover Washer	1
11	• 121677-2	• Stop Washer	1
12	• 122348	• Stop Pin	1
13	• 122350	• Set Screw	1
14	• 029-2399-00	• Curved Arm Assembly (Includes Item 15)	1
15	• • 122454-6	• • Bearing	1
16	• 040-0250-07	• Screw	1
17	• 053-1221-00	• Trim Ring	1
18	• 053-1151-01	• Unit Arm Bearing Washer	1
19	•	• Refer to: *Console Bearing Assy* Midmark Console Knight Console	Ref Ref
20		Refer to: "Power Supply Assembly"	Ref

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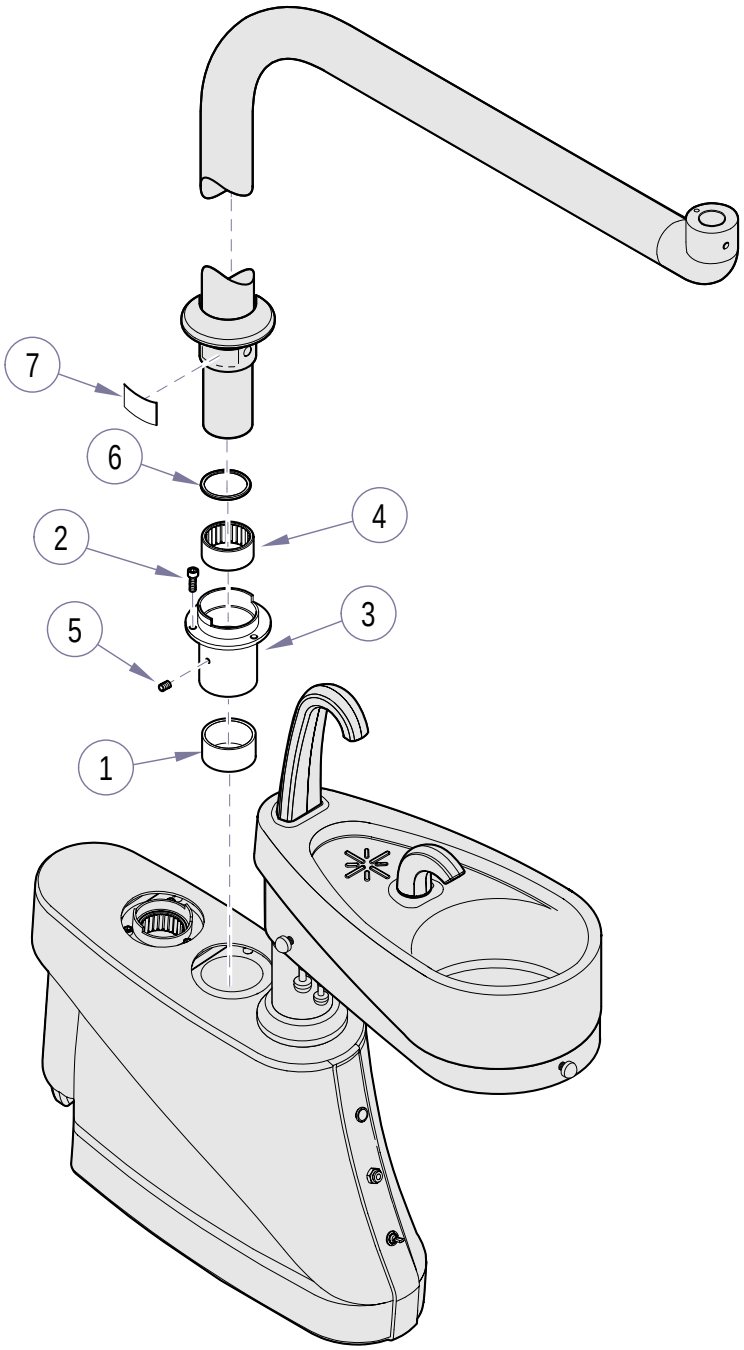
Console Bearing Assembly - *Midmark Console*



KA951500

Used on units with Serial Numbers NW-1000 thru Present

Item	Part No.	Description	Quantity
	029-2498-00	Console Bearing Assembly (Includes Items 1 thru 5)	1
1	• 016-0149-20	• Iglide Bearing	1
2	• 040-0250-07	• Screw	3
3	• 057-0569-00	• Plated Console Bearing Housing	1
4	• 016-0856-00	• Needle Bearing	1
5	• 040-0250-155	• Set Screw	2
6		Bearing Washer (Refer to "Console Light Mtg Components")	Ref
7	061-0818-00	Stop Screw Caution Label	1

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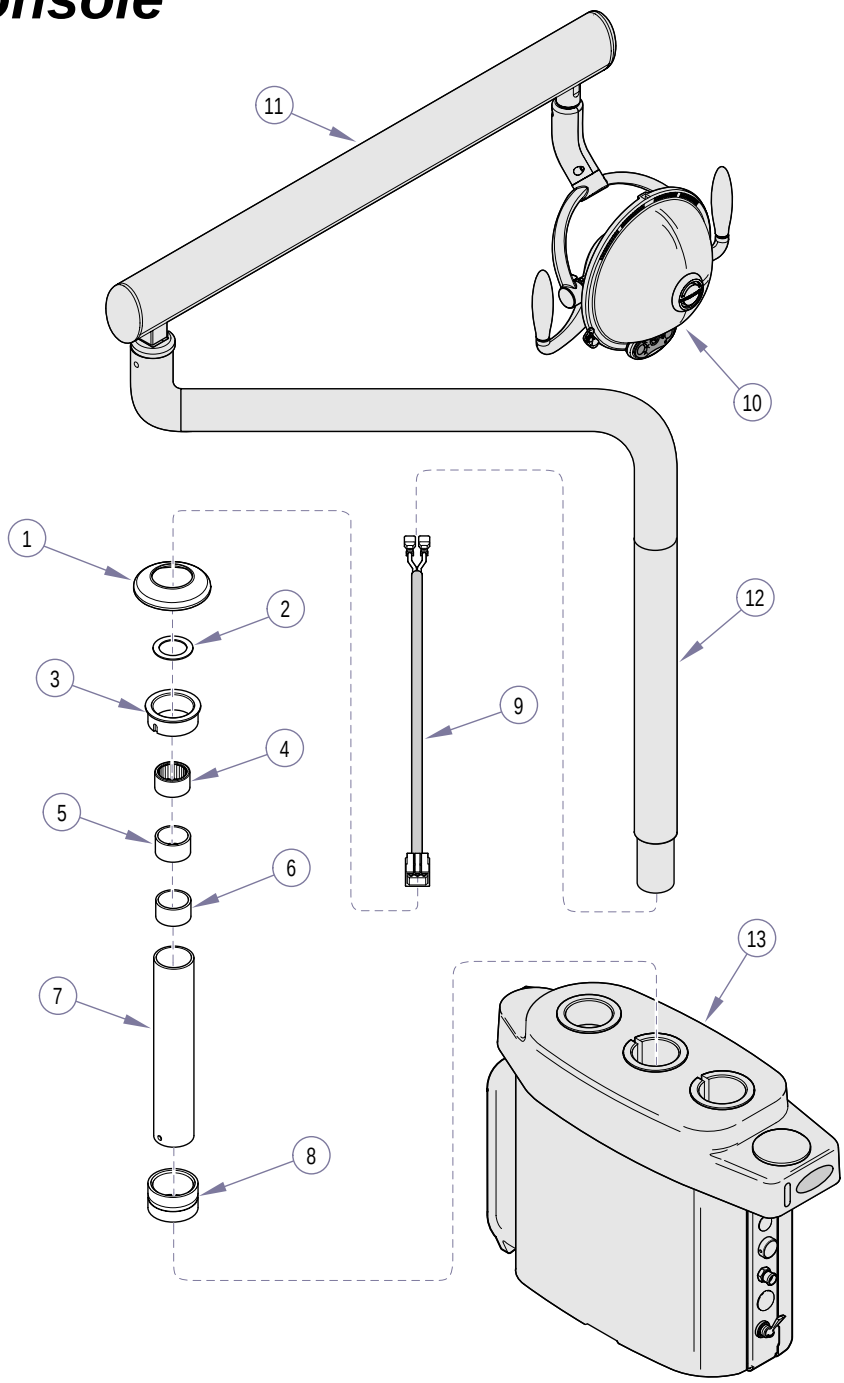
Console Bearing Assembly - *Knight Console*



DA107100

Used on units with Serial Numbers RE-1000 thru Present

Item	Part No.	Description	Quantity
	029-2864-00	Knight Console Light Post Assembly (Includes Items 1 thru 8)	1
1	• 053-1221-00	• Unit / Light Trim Ring	1
2	• 053-1151-00	• Curved Arm Bearing Washer	1
3	• 122336	• Upper Light Arm Pivot Bearing	1
4	• 016-0856-01	• Needle Bearing	1
5	• 052-0373-00	• Sleeve Bearing	1
6	• 016-0149-19	• Sleeve Bearing	1
7	• 052-0440-50	• Knight Console Light Post	1
8	• 122339	• Lower Unit & Light Arm Pivot Bearing	1
9	• 015-1592-00	• Wiring Harness Extension	1
10		Refer to "Lighthead Assembly"	Ref
11		Refer to "Flex Arm Assembly - *Chair Mtd Lights*"	Ref
12		Curved Arm Assembly (Refer to "Console Light Mtg. Components"	Ref
13		Knight Console Assembly (Refer to *Knight Dental Delivery System Service & Parts Manual)*	Ref

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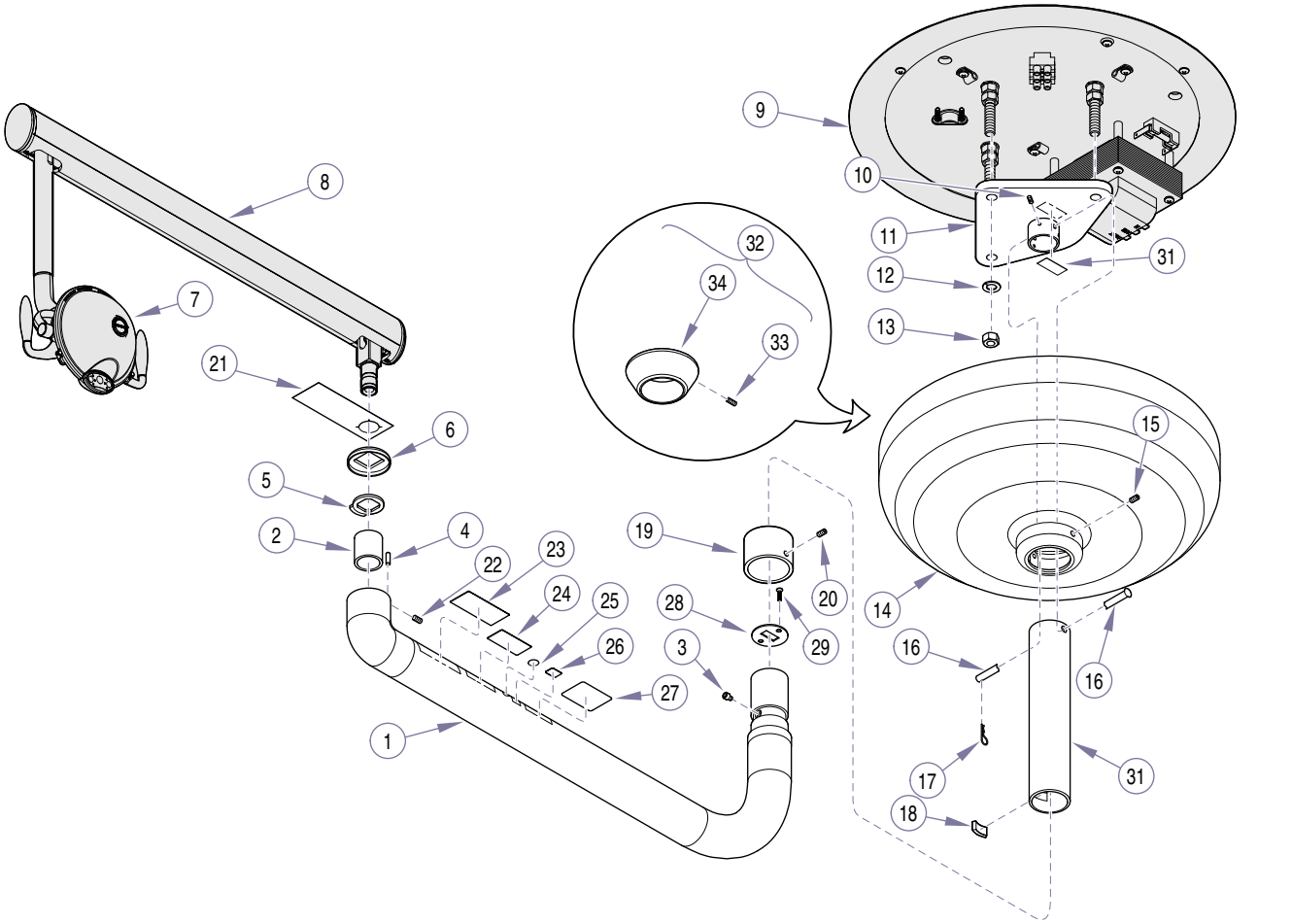
Ceiling Light Mounting Components



KA977301i

Used on units with Serial Numbers PS1000 thru PS2305

Item	Part No.	Description	Quantity
	029-2679-00	Fixed Arm Assembly (Includes Items 1 thru 3)	1
1	• 030-1315-50	• Fixed Arm Weldment	1
2	• 122454-6	• Bearing	1
3	• 040-0010-87	• Screw	1
4	122348	Dowel Pin	1
5	121677-2	Stop Washer	1
6	053-1223-00	Washer Cover	1
7		Refer to "Lighthead Assembly"	Ref
8		Refer to "Flex Arm Assembly - *Ceiling Mounted Lights*")	Ref
9		Refer to "Ceiling Plate Assembly")	Ref
10	040-0375-69	Set Screw	4
11	030-1305-50	Mounting Flange Weldment	1
12	045-0001-09	Lock Washer	3
13	041-0375-01	Hex Nut	3
14	053-1210-00	Ceiling Cover	1
15	040-0010-63	Set Screw	2
16	042-0602-32	Clevis Pin	1
17	042-0004-00	Hairpin Cotter	1
18	016-0894-00	Key	1
19	052-0410-50	Collar	1
20	040-0010-151	Set Screw	1
21	061-0805-00	Stop Ring Tag	1
22	122350	Set Screw	1
23		Serial Number Label	Ref
24	061-0735-00	ETL Label	1
25	061-0652-00	Type B Equipment Label	1
26	061-0665-00	CE Label	1
27	061-0781-00	CE Representative Label Promotal	1
28	050-5131-00	Connector Disk	1
29	121242	Screw	2
30	061-0831-00	Supension Tube Orientation Label	1
31	153651-001	10 in. Suspension Tube (96" to 98")	1
	153651-002	14 in. Suspension Tube (99" to 102")	1
	153651-003	18 in. Suspension Tube (103" to 106")	1
	153651-004	22 in. Suspension Tube (107" to 110")	1
	153651-005	26 in. Suspension Tube (111" to 114")	1
	153651-006	30 in. Suspension Tube (115" to 118")	1
	153651-007	34 in. Suspension Tube (119" to 122")	1
	153651-008	38 in. Suspension Tube (123" to 126")	1
	153651-009	42 in. Suspension Tube (127" to 130")	1
	153651-010	46 in. Suspension Tube (>130")	1
32	153676-001	Ceiling Cover Collar (Optional for Drop Ceiling) (Includes Items 33 thru 34)	Ref
33	• 040-0010-153	• Set Screw	1
34	• 057-0723-50	• Ceiling Cover Collar	1

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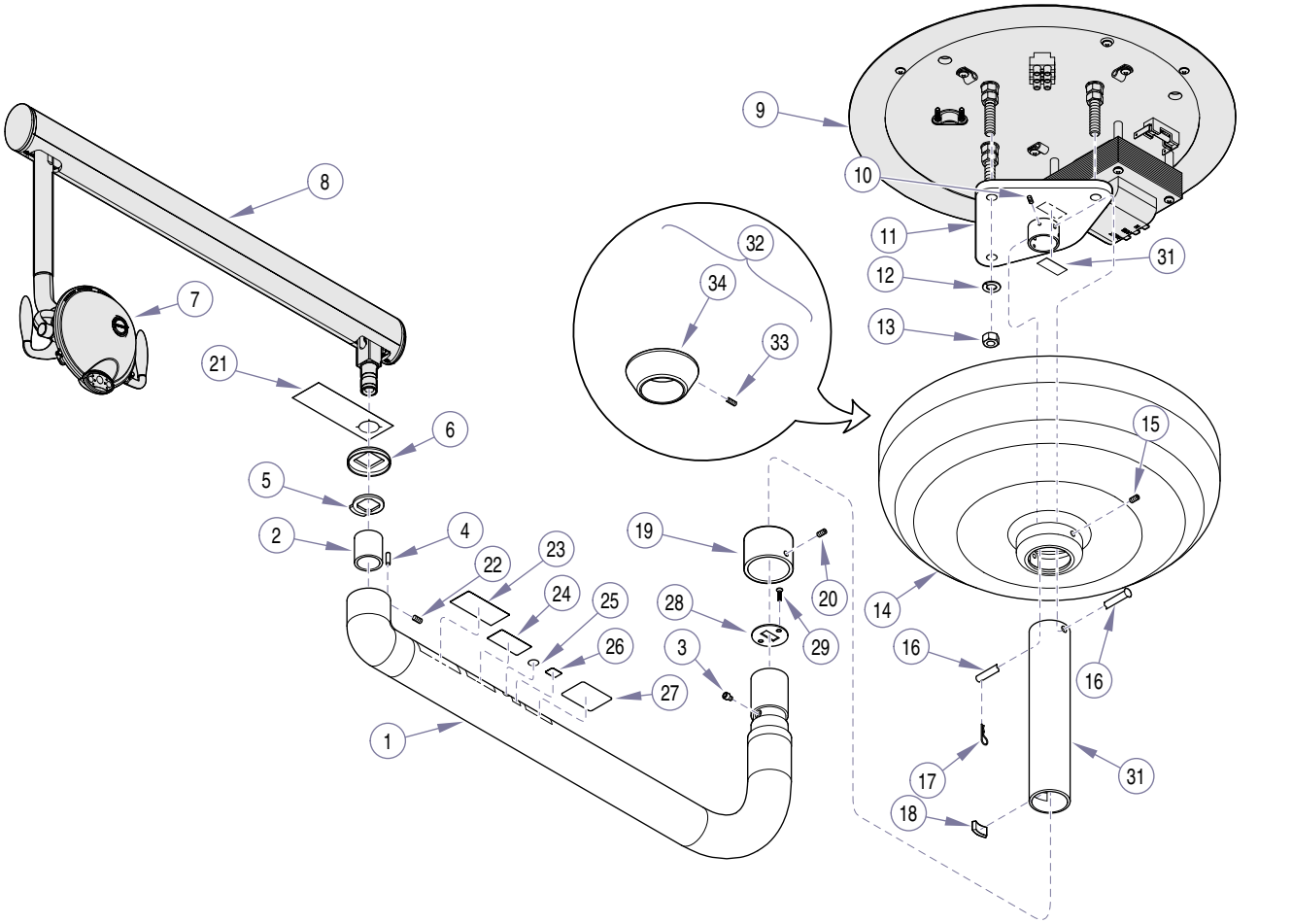
Ceiling Light Mounting Components



KA977301i

Used on units with Serial Numbers PS2306 thru Present

Item	Part No.	Description	Quantity
	029-2679-00	Fixed Arm Assembly (Includes Items 1 thru 3)	1
1	• 030-1315-50	• Fixed Arm Weldment	1
2	• 122454-6	• Bearing	1
3	• 040-0010-87	• Screw	1
4	122348	Dowel Pin	1
5	121677-2	Stop Washer	1
6	053-1223-00	Washer Cover	1
7		Refer to "Lighthead Assembly"	Ref
8		Refer to "Flex Arm Assembly - *Ceiling Mounted Lights*")	Ref
9		Refer to "Ceiling Plate Assembly")	Ref
10	040-0375-69	Set Screw	4
11	030-1305-50	Mounting Flange Weldment	1
12	045-0001-09	Lock Washer	3
13	041-0375-01	Hex Nut	3
14	053-1210-01	Ceiling Cover	1
15	040-0010-63	Set Screw	2
16	042-0602-32	Clevis Pin	1
17	042-0004-00	Hairpin Cotter	1
18	016-0894-00	Key	1
19	052-0410-50	Collar	1
20	040-0010-151	Set Screw	1
21	061-0805-00	Stop Ring Tag	1
22	122350	Set Screw	1
23		Serial Number Label	Ref
24	061-0735-00	ETL Label	1
25	061-0652-00	Type B Equipment Label	1
26	061-0665-00	CE Label	1
27	061-0781-00	CE Representative Label Promotal	1
28	050-5131-00	Connector Disk	1
29	121242	Screw	2
30	061-0831-00	Supension Tube Orientation Label	1
31	153651-001	10 in. Suspension Tube (96" to 98")	1
	153651-002	14 in. Suspension Tube (99" to 102")	1
	153651-003	18 in. Suspension Tube (103" to 106")	1
	153651-004	22 in. Suspension Tube (107" to 110")	1
	153651-005	26 in. Suspension Tube (111" to 114")	1
	153651-006	30 in. Suspension Tube (115" to 118")	1
	153651-007	34 in. Suspension Tube (119" to 122")	1
	153651-008	38 in. Suspension Tube (123" to 126")	1
	153651-009	42 in. Suspension Tube (127" to 130")	1
	153651-010	46 in. Suspension Tube (>130")	1
32	153676-001	Ceiling Cover Collar (Optional for Drop Ceiling) (Includes Items 33 thru 34)	Ref
33	• 040-0010-153	• Set Screw	1
34	• 057-0723-50	• Ceiling Cover Collar	1

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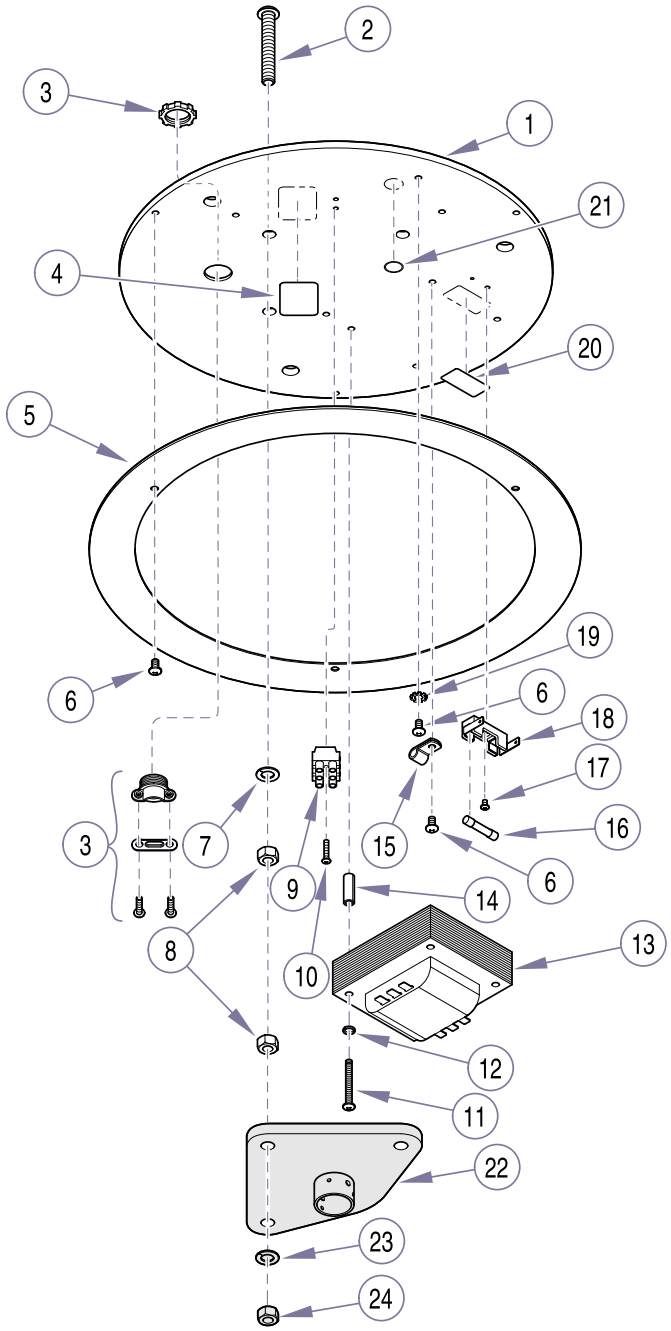
Ceiling Plate Assembly



KA982500i

Item	Part No.	Description	Quantity
	029-2660-00	Ceiling Plate Assembly (Includes items 1 thru 21)	1
1	• 050-5019-50	• Ceiling Plate	1
2	• 121871	• Bolt	3
3	• 102980	• Romex Connector	1
4	• 061-0820-00	• Terminal Block Label	1
5	• 050-5070-50	• Electrical Enclosure Trim Ring	1
6	• 040-0010-74	• Screw	7
7	• 045-0001-09	• Lock Washer	3
8	• 041-0375-01	• Hex Nut	6
9	• 015-1523-00	• Two Screw Terminal Block	1
10	• 040-0006-73	• Screw	2
11	• 040-0010-150	• Screw	4
12	• 045-0001-04	• Lock Washer	4

Item	Part No.	Description	Quantity
13	• 015-1506-00	• Transformer	1
14	• 016-0138-16	• Rolled Spacer	4
15	• 121654	• Cable Clamp	3
16	• 015-0346-00	• Fuse	1
17	• 040-0006-53	• Screw	1
18	• 015-1534-00	• Fuse Block	1
19	• 045-0001-31	• Lock Washer	1
20	• 061-0808-00	• Fuse Replacement Label	1
21	• 061-0653-00	• Ground Label	1
22		Mounting Flange (Refer to "Ceiling Light Mtg Components")	Ref
23		Washer (see item 22)	Ref
24		Hex Nut (see item 22)	Ref

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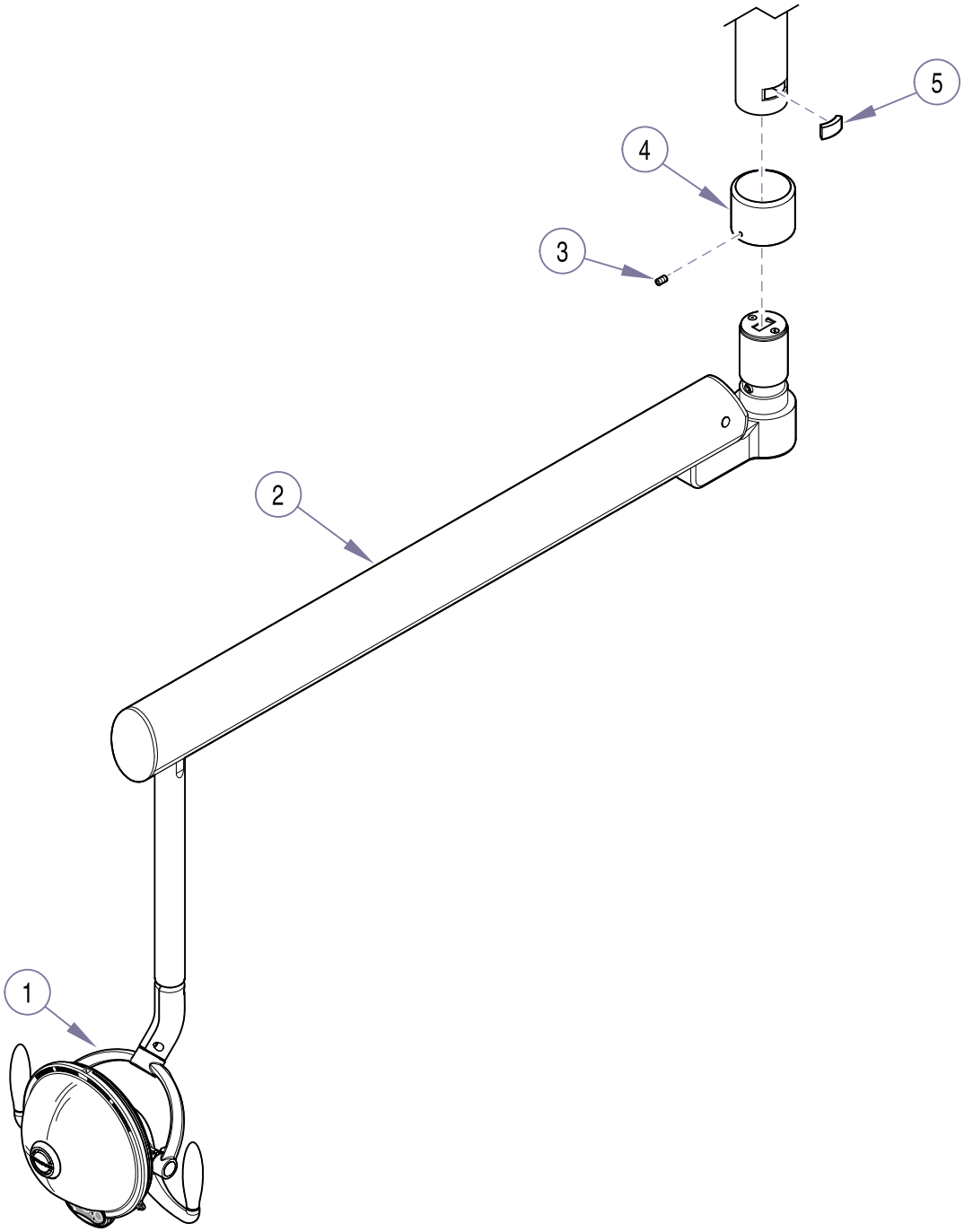
Flex Arm / Lighthead Assy - *Track, Wall, & Cabinet Mtd. Lights*



KA992600i

Item	Part No.	Description	Quantity
	153638-001	Flex Arm / Light Assembly (Includes Items 1 thru 11)	1
1	•	Light Head Assembly (Refer to "Lighthead Assembly")	Ref
2	• "	Refer to "Flex Arm Assembly - *Track, Wall, & Cabinet Mtd. Lights*" .	Ref
3	• 040-0010-151	• Set Screw	1
4	• 052-0410-50	• Collar	1
5	• 016-0894-00	• Key	1
6	• 116988	• 1/8" Allen Wrench (Not Shown)	1
7	• 121720	• Dental Light Lamp (Not Shown)	1
8	• 003-1179-00	• Track Electrical Schematic (Not Shown)	1
9	• 003-1182-00	• Wall/Cabinet Electrical Schematic (Not Shown)	1
10	• 046-0002-00	• 3/32" Allen Wrench (Not Shown)	1
11	• G15000181	• Lubriplate (Not Shown)	1

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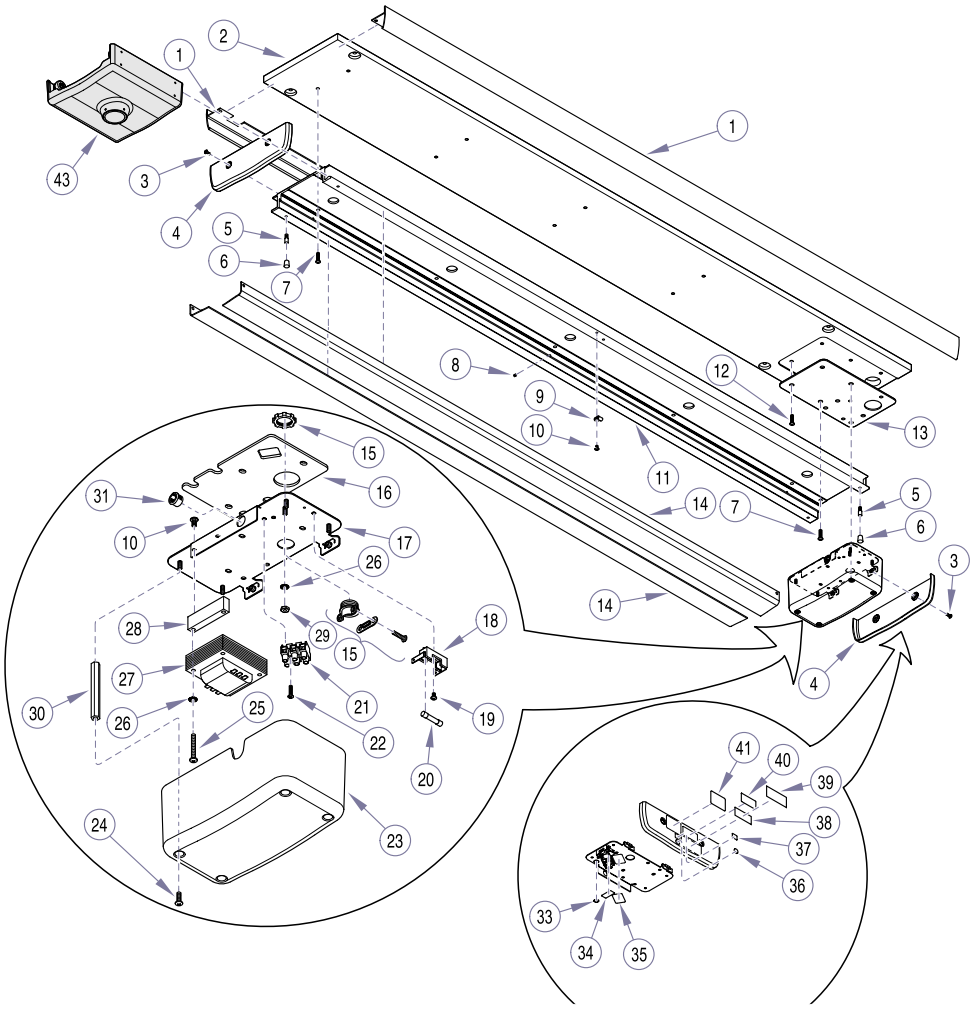
Track Assembly



KA991800i

Used on units with Serial Numbers PY1000 thru PY2245

Item	Part No.	Description	Quantity
	029-2705-00	Track Assembly (Includes items 1 thru 33)	1
1	• 021-0049-50	• Painted Track Side Cover	2
2	• 029-2712-00	• Track Backboard Assembly	1
3	• 040-0010-145	• Screw	4
4	• 053-1233-00	• Track Light End Cap	2
5	• 042-0207-00	• Track Light Stop	4
6	• 053-1240-00	• Track Light Stop Bumper	4
7	• 040-0250-104	• Screw	12
8	• 040-0010-126	• Screw	6
9	• 015-0371-00	• Cable Clamp	3
10	• 040-0010-109	• Screw	7
11	• 021-0047-00	• Machined Track	1
12	• 040-0010-137	• Screw	3
13	• 050-5163-00	• Backer Board Heat Sink	1
14	• 021-0048-50	• Painted Track Bottom Cover	2
15	• 102980	• Romex Connector	1
16	• 050-5130-00	• Transformer Base Heat Sink	1
17	• 029-2710-50	• Transformer Base Plate Assembly	1
18	• 015-1534-00	• Fuse Block	1
19	• 040-0006-53	• Screw	1
20	• 015-0346-00	• Fuse (1.5 Amp Slo-Blo)	1
21	• 015-1373-02	• Terminal Block	1
22	• 040-0006-78	• Screw	2
23	• 053-1230-00	• Track Transformer Cover	1

Item	Part No.	Description	Quantity
23	• 053-1230-00	• Track Transformer Cover	1
24	• 040-0010-12	• Screw	4
25	• 040-0010-136	• Screw	4
26	• 045-0001-31	• Washer	5
27	• 015-1506-00	• Transformer	1
28	• 051-0970-00	• Transformer Standoff	2
29	• 041-0010-00	• Hex Nut	1
30	• 051-0955-00	• Hex Standoff	4
31	• 053-0789-00	• Split Snap Bushing	1
32	• 015-1519-00	• Track Harness Assembly (Not Shown)	1
33	061-0653-00	Earth (Ground) Label	1
34	061-0808-00	Fuse Replacement Label	1
35	061-0820-00	Terminal Block Label	1
36	061-0652-00	Type B Equipment Label	1
37	061-0665-00	CE Label	1
38		Serial Label	Ref
39		Clear Laminate	Ref
40	061-0735-00	ETL Label	1
41	061-0781-00	CE Representative Label Promotal	1
42		Trolley Assembly (Refer to "Trolley Assembly" Elsewhere)	Ref
43	003-1236-00	Track Installation Manual (Not Shown)	1
44	003-1108-00	Light Module Operation Manual (Not Shown)	1

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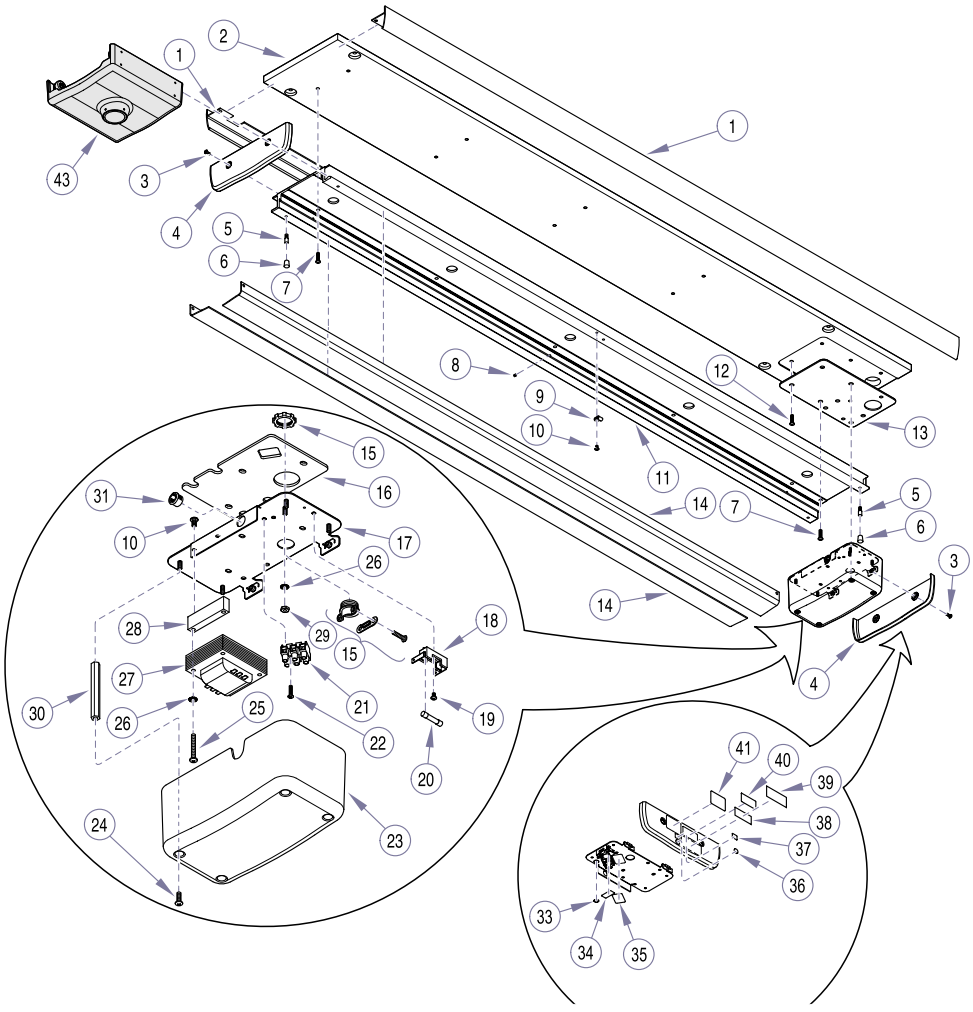
Track Assembly



KA991800i

Used on units with Serial Numbers PY2246 thru Present

Item	Part No.	Description	Quantity
	029-2705-00	Track Assembly (Includes items 1 thru 33)	1
1	• 021-0049-50	• Painted Track Side Cover	2
2	• 029-2712-00	• Track Backboard Assembly	1
3	• 040-0010-145	• Screw	4
4	• 053-1233-01	• Track Light End Cap	2
5	• 042-0207-00	• Track Light Stop	4
6	• 053-1240-00	• Track Light Stop Bumper	4
7	• 040-0250-104	• Screw	12
8	• 040-0010-126	• Screw	6
9	• 015-0371-00	• Cable Clamp	3
10	• 040-0010-109	• Screw	7
11	• 021-0047-00	• Machined Track	1
12	• 040-0010-137	• Screw	3
13	• 050-5163-00	• Backer Board Heat Sink	1
14	• 021-0048-50	• Painted Track Bottom Cover	2
15	• 102980	• Romex Connector	1
16	• 050-5130-00	• Transformer Base Heat Sink	1
17	• 029-2710-50	• Transformer Base Plate Assembly	1
18	• 015-1534-00	• Fuse Block	1
19	• 040-0006-53	• Screw	1
20	• 015-0346-00	• Fuse (1.5 Amp Slo-Blo)	1
21	• 015-1373-02	• Terminal Block	1
22	• 040-0006-78	• Screw	2
23	• 053-1230-01	• Track Transformer Cover	1
23	• 053-1230-00	• Track Transformer Cover	1
24	• 040-0010-12	• Screw	4
25	• 040-0010-136	• Screw	4
26	• 045-0001-31	• Washer	5
27	• 015-1506-00	• Transformer	1
28	• 051-0970-00	• Transformer Standoff	2
29	• 041-0010-00	• Hex Nut	1
30	• 051-0955-00	• Hex Standoff	4
31	• 053-0789-00	• Split Snap Bushing	1
32	• 015-1519-00	• Track Harness Assembly (Not Shown)	1
33	061-0653-00	Earth (Ground) Label	1
34	061-0808-00	Fuse Replacement Label	1
35	061-0820-00	Terminal Block Label	1
36	061-0652-00	Type B Equipment Label	1
37	061-0665-00	CE Label	1
38		Serial Label	Ref
39		Clear Laminate	Ref
40	061-0735-00	ETL Label	1
41	061-0781-00	CE Representative Label Promotal	1
42		Trolley Assembly (Refer to "Trolley Assembly" Elsewhere)	Ref
43	003-1236-00	Track Installation Manual (Not Shown)	1
44	003-1108-00	Light Module Operation Manual (Not Shown)	1

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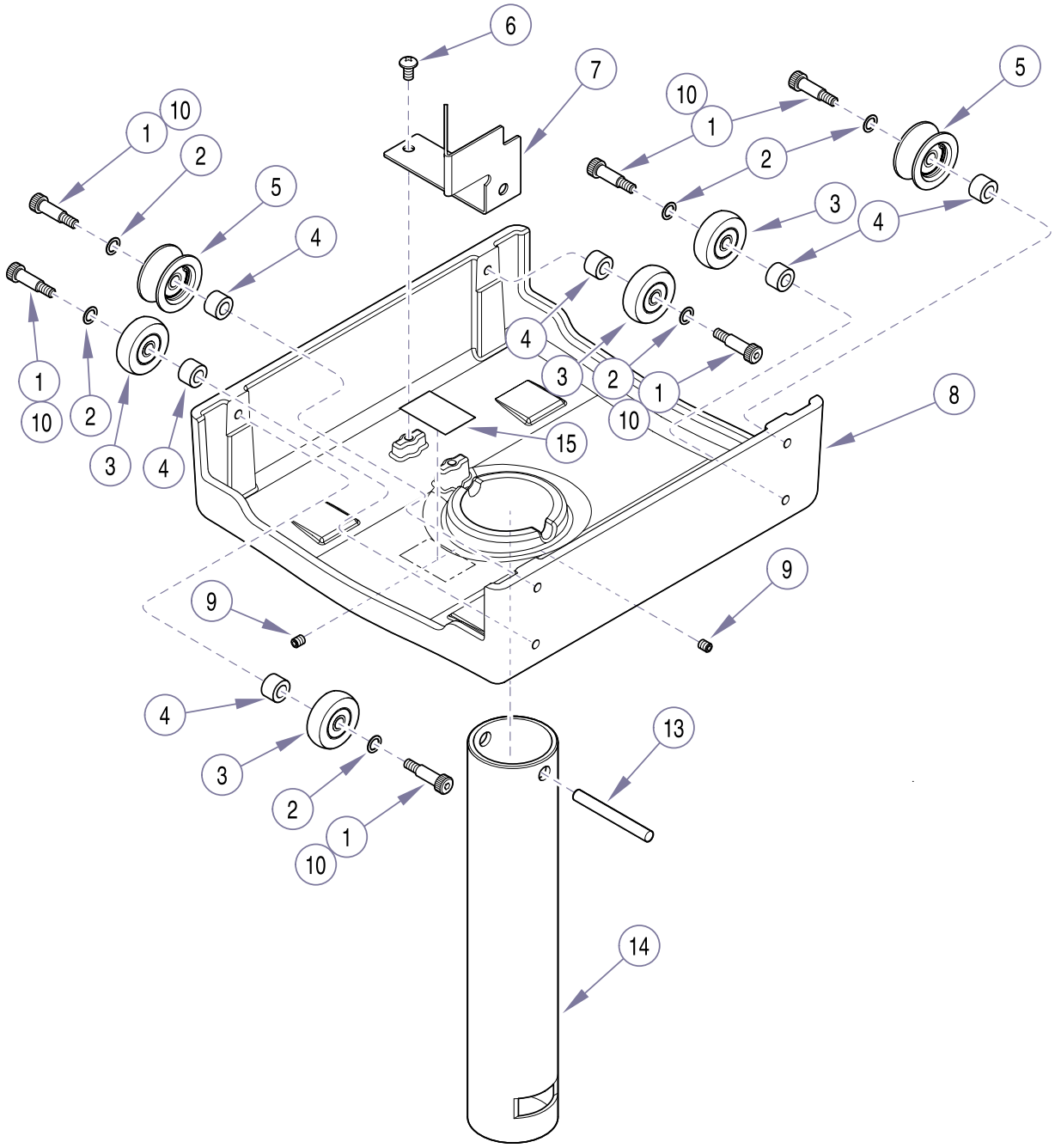
Trolley Assembly



KA991700i

Item	Part No.	Description	Quantity
	029-2729-00	Trolley Assembly (Includes items 1 thru 12)	1
1	• 040-0010-29	• Screw	6
2	• 045-0001-127	• Washer	6
3	• 016-0900-00	• Cast Track Wheel	4
4	• 057-0660-00	• Wheel Spacer	6
5	• 029-2704-00	• Track Wheel Assembly	2
6	• 040-0010-109	• Screw	2
7	• 050-5066-50	• Trolley Harness Bracket	1
8	• 020-0227-50	• Trolley	1
9	• 040-0010-126	• Set Screw	1
10	• 042-0025-00	• Loctite	AR
11	• 015-0013-00	• Cable Tie (Not Shown)	1
12	• 015-1512-00	• Wire Harness (Not Shown)	1
13	051-0966-00	Headless Clevis Pin	1
14	153651-001	10 in. Suspension Tube (<96”)	1
	153651-002	14 in. Suspension Tube (96” to 98”)	1
	153651-003	18 in. Suspension Tube (99” to 102”)	1
	153651-004	22 in. Suspension Tube (103” to 106”)	1
	153651-005	26 in. Suspension Tube (107” to 110”)	1
	153651-006	30 in. Suspension Tube (111” to 114”)	1
	153651-007	34 in. Suspension Tube (115” to 118”)	1
	153651-008	38 in. Suspension Tube (119” to 122”)	1
	153651-009	42 in. Suspension Tube (123” to 126”)	1
	153651-010	46 in. Suspension Tube (>126”)	1
15	061-0829-00	Supension Tube Orientation Label	1

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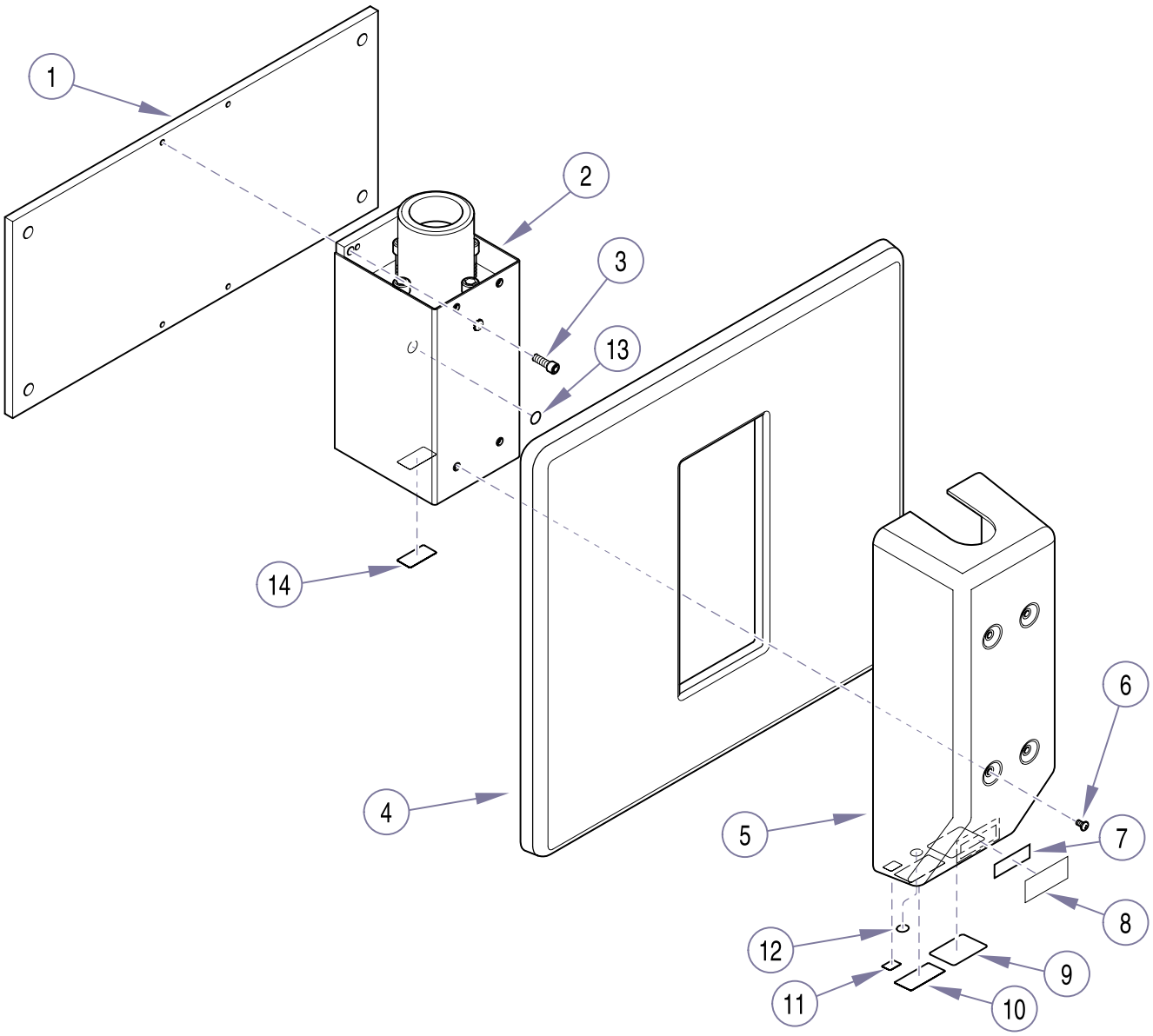
Wall Mount Assembly



KA979200i

Item	Part No.	Description	Quantity
	153640-001	Wall Mount Assembly (Includes Items 1 thru 13)	1
1	• 050-5174-50	• Wall Mount Backer	1
2	•	• Cabinet Light Mount Assy (Refer to "Cabinet Mount Assembly")	Ref
3	• 040-0250-76	• Screw	4
4	• 053-1245-00	• Wall Mount Cover	1
5	• 053-1246-00	• Transformer Cover	1
6	• 040-0010-109	• Screw	4
7	•	• Serial Number Label	Ref
8	• 061-0666-00	• Clear Laminate	1
9	• 061-0781-00	• CE Representative Label	1
10	•	• ETL Label	Ref
11	• 061-0665-00	• CE Label	1
12	• 061-0652-00	• Type B Equipment Label	1
13	• 122618	• 120 V Plug (Not Shown)	1
14		Fuse Replacement Label (Refer to Cabinet Mount Assembly")	Ref
15		Earth (Ground) Label (Refer to Cabinet Mount Assembly")	Ref

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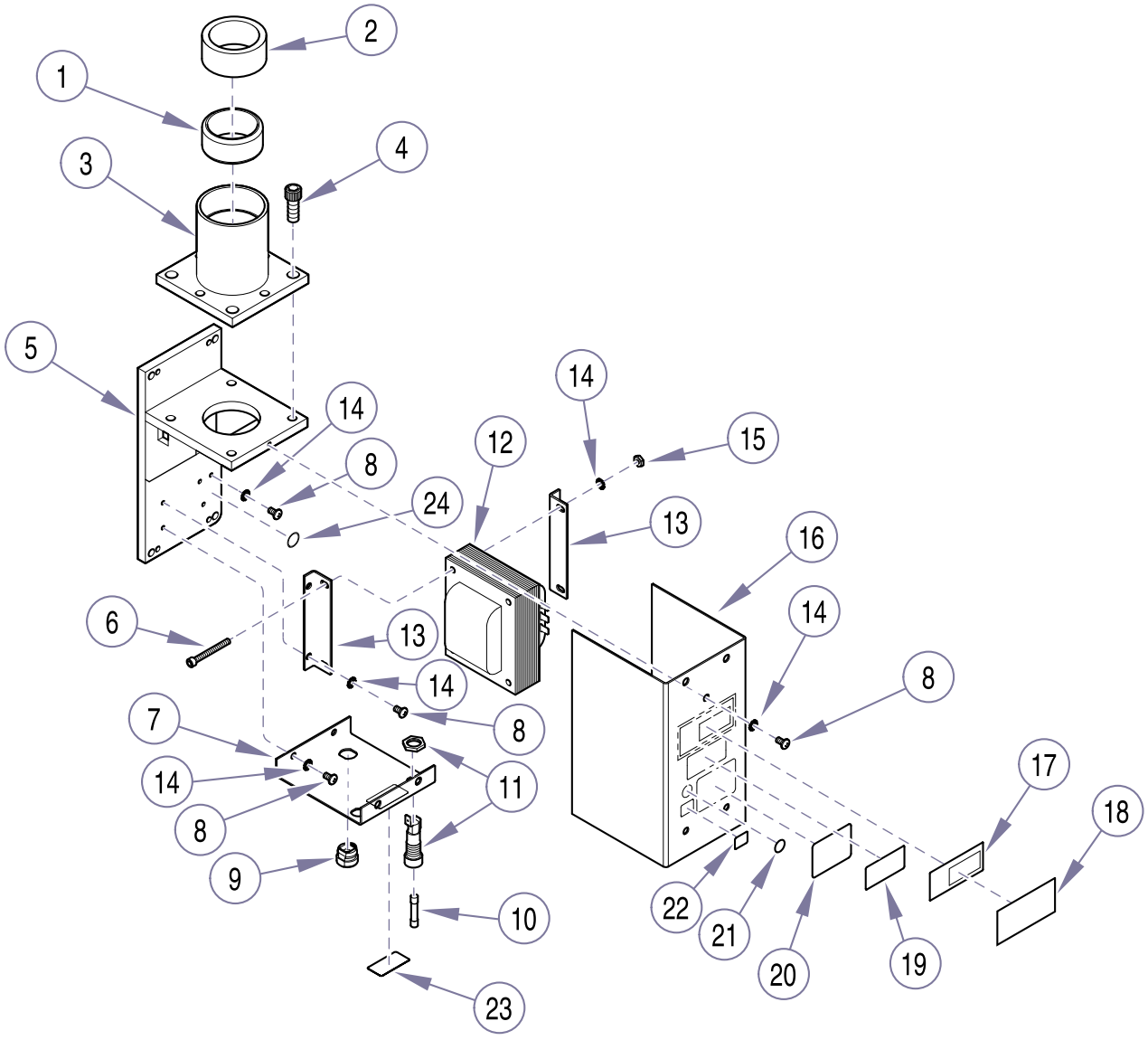
Cabinet Mount Assembly



KA994700i

Item	Part No.	Description	Quantity
	153641-001	Cabinet Mount Assembly (Includes Items 1 thru 27)	1
1	• 016-0856-00	• Needle Bearing	1
2	• 122964	• Bearing	1
3	• 030-1341-50	• Wall Bearing Housing	1
4	• 040-0375-76	• Screw	8
5	• 030-1340-50	• Wall Mount Bracket	1
6	• 040-0010-107	• Screw	2
7	• 029-2720-00	• Wall Cover Bracket Assembly	1
8	• 040-0010-109	• Screw	8
9	• 015-0002-00	• Strain Relief Bushing	1
10	• 015-0346-00	• Fuse	2
11	• 015-1259-02	• Fuse Holder	2
12	• 015-1506-00	• Transformer	1
13	• 050-5157-00	• Transformer Bracket	2
14	• 045-0001-31	• Lock Washer	6
15	• 041-0010-00	• Hex Nut	2

Item	Part No.	Description	Quantity
14	• 045-0001-31	• Lock Washer	6
15	• 041-0010-00	• Hex Nut	2
16	• 029-2745-00	• Transformer Cover Assembly	1
17	•	• Serial Number Label	1
18	• 061-0666-00	• Clear Laminate	1
19	•	• ETL Label	Ref
20	• 061-0781-00	• CE Representative Label	1
21	• 061-0652-00	• Type B Equipment Label	1
22	• 061-0665-00	• CE Label	1
23	• 061-0808-00	• Fuse Replacement Label	1
24	• 061-0653L-00	• Earth (Ground) Label	1
25	• 003-1108-00	• Light Operation Manual (Not Shown)	1
26	• 003-1239-00	• Installation Manual (Not Shown)	1
27	• 122618	• 120 V Plug (Not Shown)	1
28	• 120288	• Mounting Screw (Not Shown)	4
29	• 041-0250-01	• Mounting Nut (Not Shown)	4
30	• 045-0001-03	• Mounting Lockwasher (Not Shown)	4

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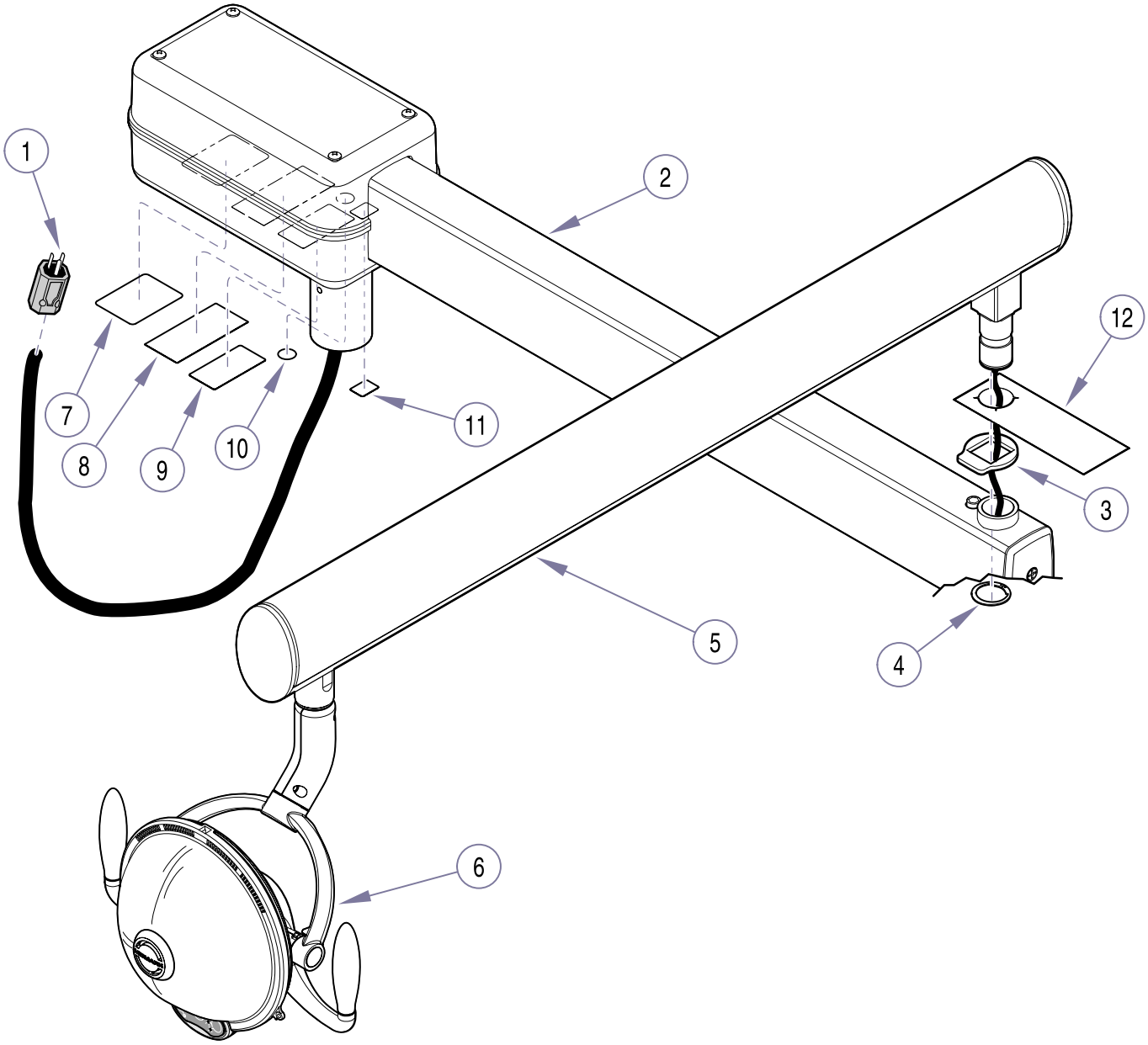
Flex Arm / Lighthead Assy - *Universal Mounted Light*



KA977400i

Item	Part No.	Description	Quantity
	153639-001	Universal Light Assembly (Includes Items 1 thru 5)	1
1	• 122618	• 120 V Plug	1
2	•	• Refer to "Fixed Arm Assy- *Universal Light*")	Ref
3	• 121677-2	• Stop Washer	1
4	• 110065	• Retaining Ring	1
5	•	• Refer to "Flex Arm Assembly - *Universal Mtd. Lights*")	Ref
6	•	• Refer to "Lighthead Assembly")	Ref
7	• 061-0781-00	• CE Representative Label Promotal	1
8	•	• Serial Number Label	Ref
9	• 061-0735-00	• ETL Label	1
10	• 061-0652-00	• Type B Equipment Label	1
11	• 061-0665-00	• CE Label	1
12	• 061-0805-00	• Stop Ring Mounting Tag	1
13	• 003-1108-00	• Light Module Operation Manual (Not Shown)	1
14	• 003-1238-00	• Univ. Inst. Instr. Manual (Not Shown)	1

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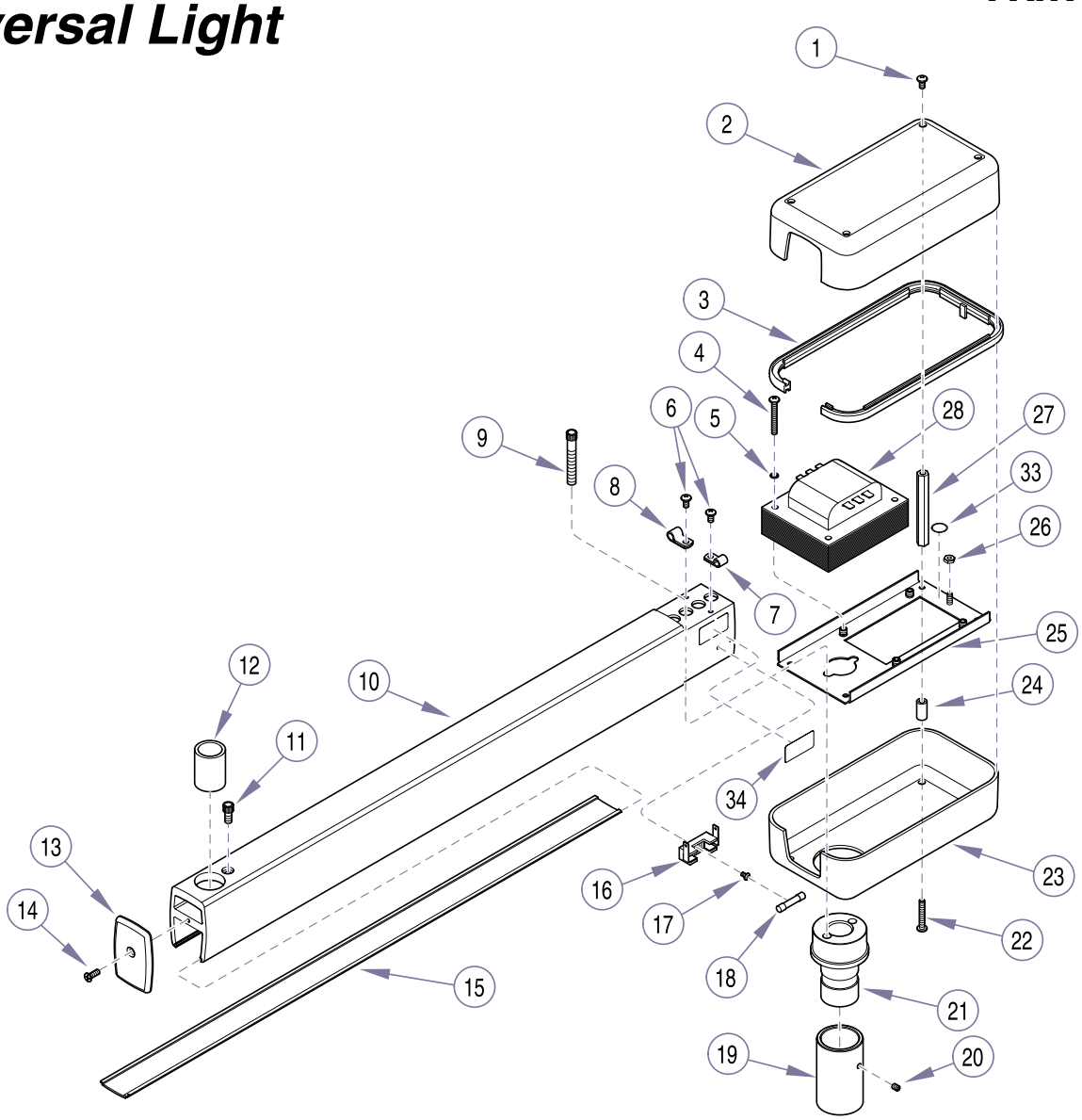
Fixed Arm Assembly - *Universal Light*



KA993400i

Used on units with Serial Numbers PV1000 thru PV1475

Item	Part No.	Description	Quantity
	029-2744-00	Light Fixed Arm Assembly (Includes Items 1 thru 32)	1
1	• 040-0010-109	• Screw	4
2	• 053-1224-00	• Top Transformer Cover	1
3	• 053-1222-00	• Trim Ring	1
4	• 040-0010-136	• Screw	4
5	• 045-0001-04	• Washer	4
6	• 117558	• Screw	2
7	• 121656	• Cable Clamp	1
8	• 121654	• Cable Clamp	1
9	• 121751	• Screw (Apply 042-0024-00 Adhesive)	2
10	• 021-0055-50	• Universal Post Mounted Fixed Arm	1
11	• 117636	• Screw	1
12	• 117505	• Sleeve Bearing	1
13	• 053-1216-01	• Universal End Cap	1
14	• 121508-50	• Screw	1
15	• 121746-50	• Fixed Arm Cover	1
16	• 015-1534-00	• Fuseblock	2
17	• 040-0006-53	• Screw	2
18	• 015-0346-00	• Fuse	2
19	• 122197-2	• Male Sleeve Pivot Bearing	1
20	• 106753	• Set Screw	2
21	• 051-0975-00	• Male Pivot Bearing	1
22	• 040-0010-13	• Screw	4
23	• 053-1225-00	• Transformer Bottom Cover	1
24	• 052-0426-00	• Spacer	4
25	• 029-2749-00	• Transformer Chassis Assembly	1
26	• 041-0010-00	• Nut	1
27	• 051-0976-00	• Hex Standoff	4
28	• 015-1506-00	• Transformer	1
29	• 015-0737-07	• Jumper Wire (Not Shown)	1
30	• 015-0737-08	• Jumper Wire (Not Shown)	2
31	• 015-1517-00	• Univ. Flex Arm Harness (Not Shown)	1
32	• 015-1510-03	• Power Cord Assembly (Not Shown)	1
33	061-0653-00	Earth (Ground) Label	1
34	061-0808-00	Fuse Replacement Label	2

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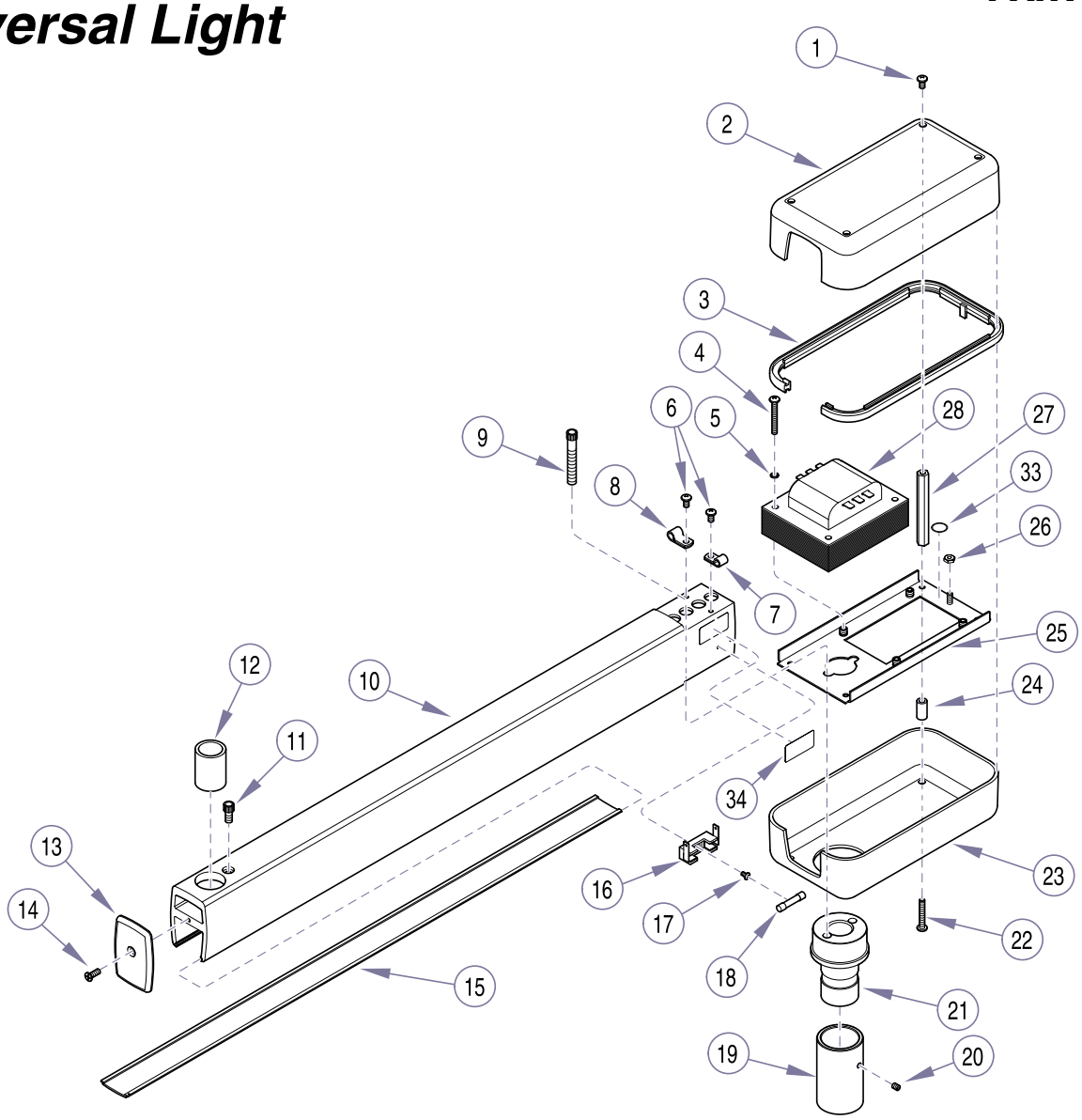
Fixed Arm Assembly - *Universal Light*



KA993400i

Used on units with Serial Numbers PV1476 thru Present

Item	Part No.	Description	Quantity
	029-2744-00	Light Fixed Arm Assembly (Includes Items 1 thru 32)	1
1	• 040-0010-109	• Screw	4
2	• 053-1224-00	• Top Transformer Cover	1
3	• 053-1222-01	• Trim Ring	1
4	• 040-0010-136	• Screw	4
5	• 045-0001-04	• Washer	4
6	• 117558	• Screw	2
7	• 121656	• Cable Clamp	1
8	• 121654	• Cable Clamp	1
9	• 121751	• Screw (Apply 042-0024-00 Adhesive)	2
10	• 021-0055-50	• Universal Post Mounted Fixed Arm	1
11	• 117636	• Screw	1
12	• 117505	• Sleeve Bearing	1
13	• 053-1216-01	• Universal End Cap	1
14	• 121508-50	• Screw	1
15	• 121746-50	• Fixed Arm Cover	1
16	• 015-1534-00	• Fuseblock	2
17	• 040-0006-53	• Screw	2
18	• 015-0346-00	• Fuse	2
19	• 122197-2	• Male Sleeve Pivot Bearing	1
20	• 106753	• Set Screw	2
21	• 051-0975-00	• Male Pivot Bearing	1
22	• 040-0010-13	• Screw	4
23	• 053-1225-00	• Transformer Bottom Cover	1
24	• 052-0426-00	• Spacer	4
25	• 029-2749-00	• Transformer Chassis Assembly	1
26	• 041-0010-00	• Nut	1
27	• 051-0976-00	• Hex Standoff	4
28	• 015-1506-00	• Transformer	1
29	• 015-0737-07	• Jumper Wire (Not Shown)	1
30	• 015-0737-08	• Jumper Wire (Not Shown)	2
31	• 015-1517-00	• Univ. Flex Arm Harness (Not Shown)	1
32	• 015-1510-03	• Power Cord Assembly (Not Shown)	1
33	061-0653-00	Earth (Ground) Label	1
34	061-0808-00	Fuse Replacement Label	2

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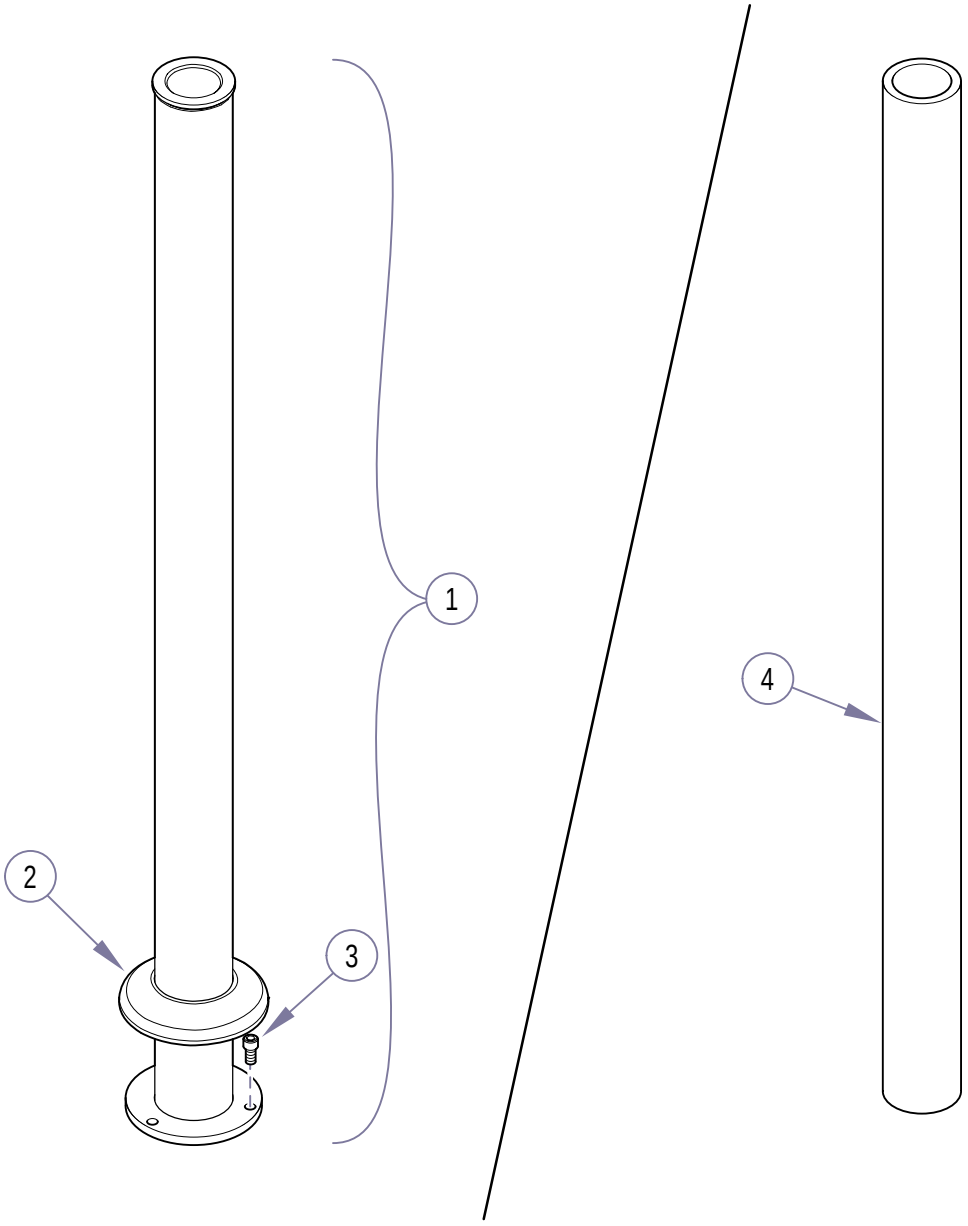
Mounting Posts - *Universal Light*



NOTE
Item 1 is an adapter to mount the universal light to a Midmark console.
Item 4 is a straight mounting post for other mounting options.

DA115700i

Item	Part No.	Description	Quantity
1	153697	Universal / Console Light Adapter [w/bearing] (incl. items 2 & 3)	1
2	• 053-1221-00	• Trim Ring	1
3	• 040-0250-07	• Screw	3
4	152598-50	48 in. Mounting Post [w/bearing]	1

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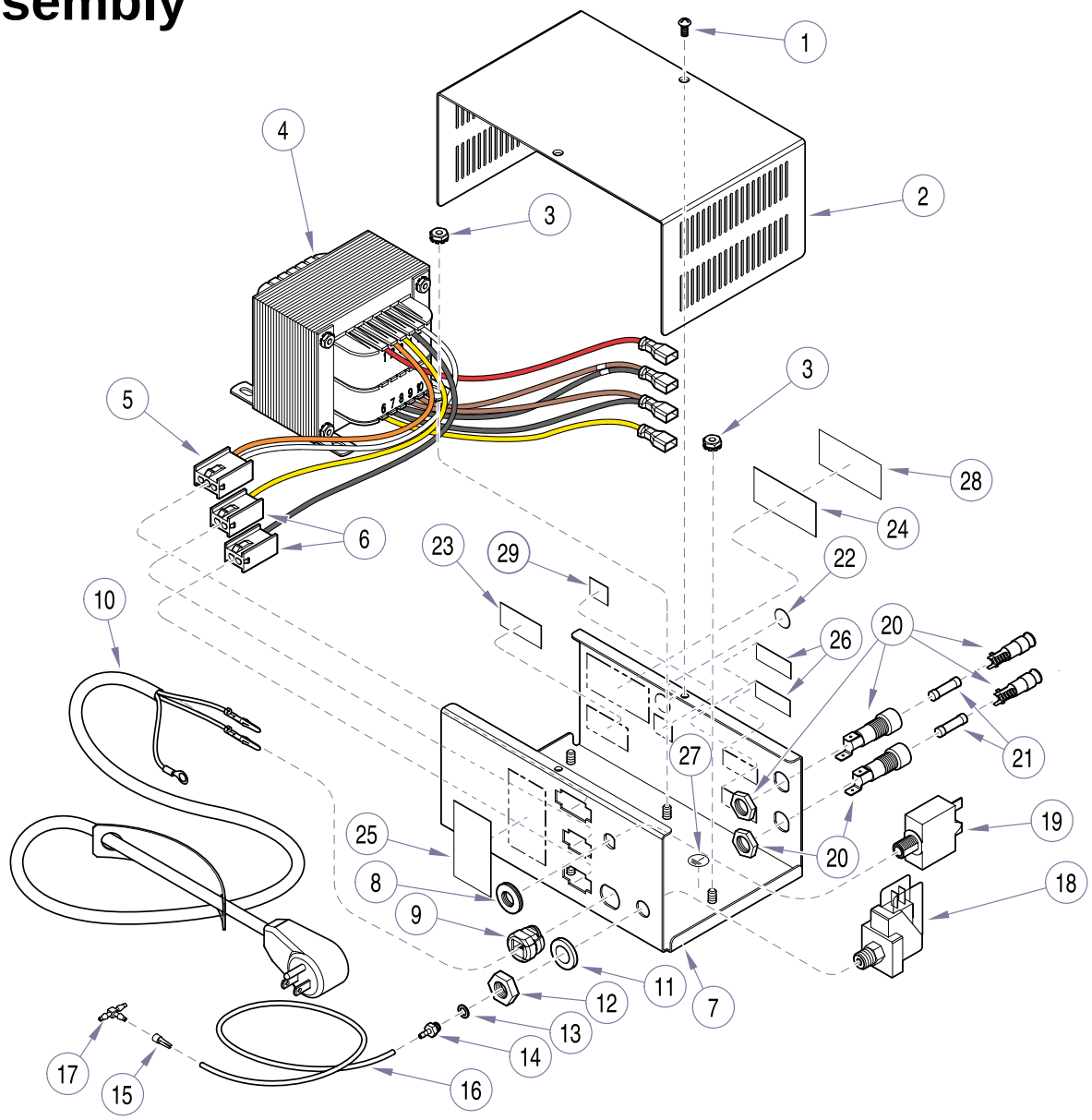
Power Supply Assembly



KA951701i

Item	Part No.	Description	Quantity
	153606	Power Supply Assembly - 115V - 300 Watt (Includes Items 1 thru 28)	1
	153642	Power Supply Assembly - 230V - 300 Watt (Includes Items 1 thru 29)	1
1	• 040-0010-47	• Screw	2
2	• 050-4874-50	• Power Supply Cover	1
3	• 122357	• Keps Lock Nut	5
4	• 015-1476-00	• Transformer - (115V Only) - 300W	1
	• 015-1511-00	• Transformer - (230V Only) - 300W	1
5	• 015-0591-02	• Mate-N-Lock connector cap	1
6	• 015-0591-01	• Mate-N-Lock connector cap	2
7	• 029-2513-50	• Power Supply Chassis Assembly	1
8	• 015-1415-00	• Nut - Press to Reset	1
9	• 015-0002-08	• Strain Relief Bushing	1
10	• 123108-01	• Power Cord Assembly - (115V Only)	1
	• 015-1510-01	• Power Cord Assembly - (230V Only) (Not Shown)	1
11	• 045-0001-49	• Washer	1
12	• 041-0040-00	• Locknut	1
13	• 117660	• Gasket	1
14	• 109714	• Barb Fitting	1
15	• 117479	• Uni-Clamp	1
16	• 117531	• Red Tubing (Sold by the foot)	1
17	• 117477	• Barb “T” Fitting	1
18	• 015-1408-00	• Pressure Switch	1
19	• 015-1410-00	• Circuit Breaker	1
20	• 015-1259-01	• Fuse Holder Assembly	2
21	• 015-0346-01	• 4 AMP Fuse (Type T)	2
22	• 061-0652-00	• Type “B” Equipment Label	1
23	• 061-0735-00	• ETL Label - (115V Only)	1
	• 061-0782-00	• CE REP Label Promotal - (230V Only)	1
24	• 061-0785-00	• Serial Number Label	1
25	• 061-0793-00	• Power Supply Output Ports Label	1
26	• 061-0794-00	• Fuse Label	2
27	• 061-0653-00	• Ground Label	1
28	• 061-0666-00	• Clear Laminate (To Cover S/N Label)	1
29	• 061-0665-00	• CE Label - (230V Only)	1

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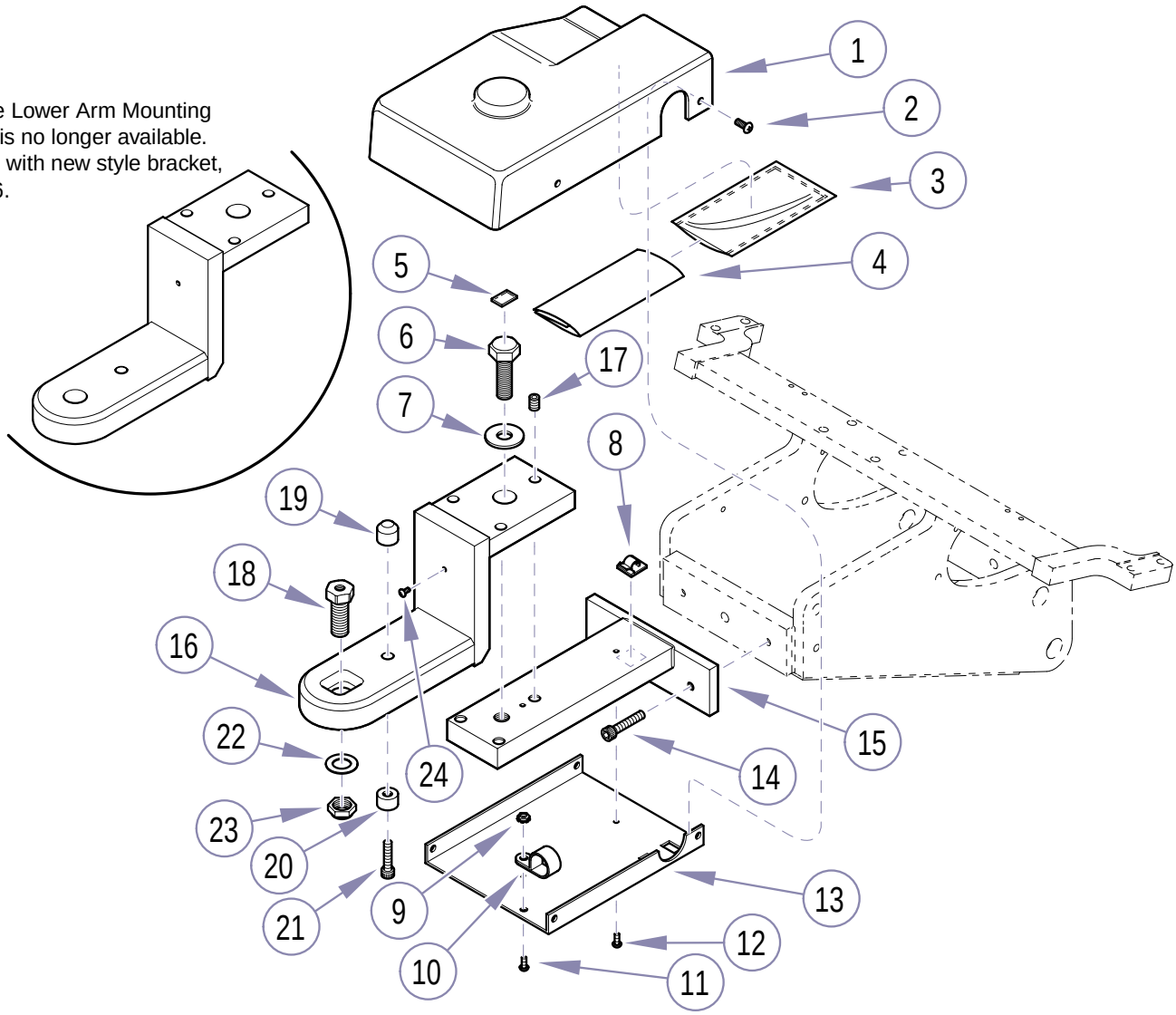
L/R Bracket Components - *Knight Chair*

Old style Lower Arm Mounting Bracket is no longer available. Replace with new style bracket, item #16.



DA131400i

Used when mounting Midmark Dental Light to Knight Chair

Item	Part No.	Description	Quantity
	029-3002-00	**Knight LR Arm Adapter** *(includes items 1 thru 25)*	1
1	• 122638-01	• Bracket Cover	1
2	• 121981-50	• Screw	4
3	• 134550	• Envelope	1
4	• TPW1700	• Flow Diagram	1
5	• 275184	• Foam Tape (per foot)	AR
6	• 122552	• Screw	1
7	• 122554	• Washer	1
8	• 109191	• Cord Clip	1
9	• 122357	• Nut	1
10	• 122636	• Cable Clamp	1
11	• 105480	• Screw	2
12	• 121127	• Screw	1
13	• 122539-50	• Wire Harness Plate	1
14	• 15300	• Screw	2
15	• 153054-50	• Mounting Bracket	1
16	• 030-1465-50	• Lower Arm Mounting Bracket	1
17	• 122547	• Set Screw	3
18	• 042-0206-00	• Screw	1
19	• 122550	• Light Arm Stop Bumper	1
20	• 122549	• Unit Arm Stop Bumper	1
21	• 107995	• Screw	1
22	• 122554	• Washer	1
23	• 122553	• Nut	1
24	• 105480	• Screw	1
25	• 121877	• Cable Clamp (not shown)	1

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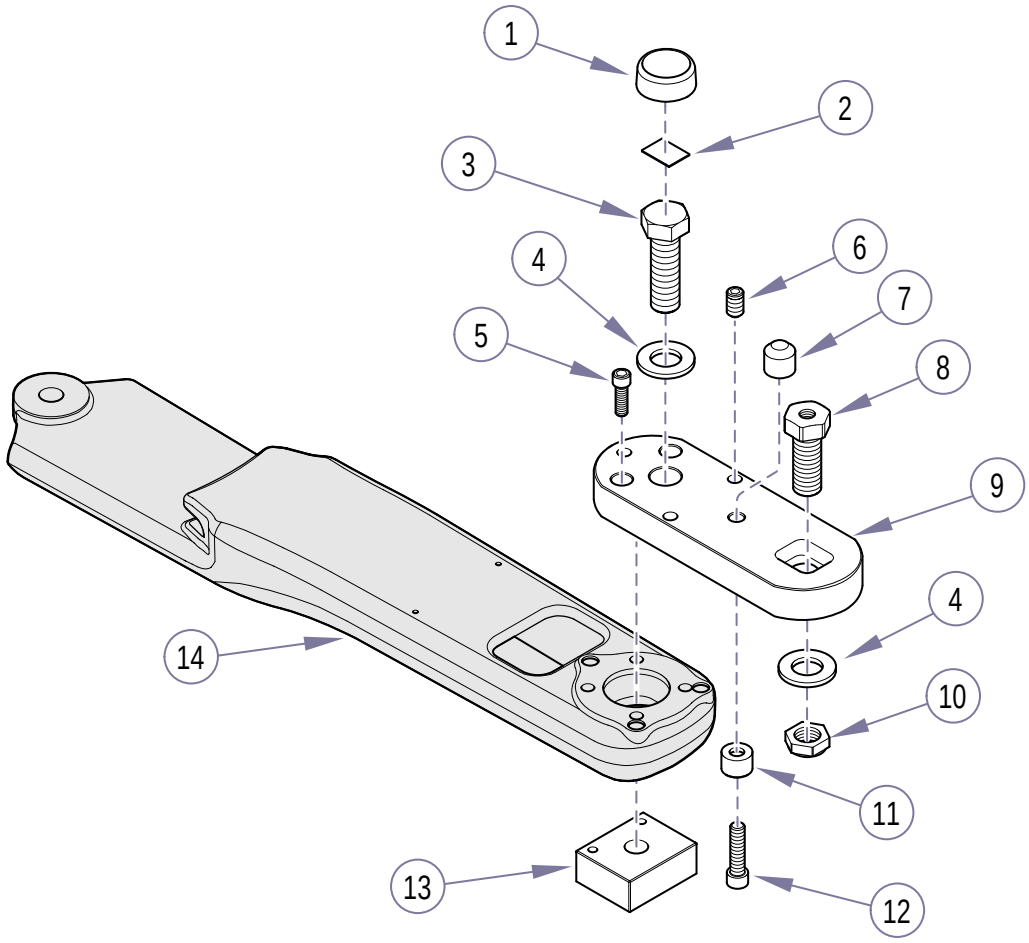
L/R Bracket Components - *Midmark Chair*



DA131500i

Used when mounting Midmark Dental Light to Midmark Chair

Item	Part No.	Description	Quantity
	029-2696-01	LR Light Mount Adapter (includes items 1 thru 13)	1
1	• 122596-01	• Bol t Cover	1
2	• 275184	• Dbl. Sided Tape	AR
3	• 040-0750-02	• Screw	1
4	• 122554	• Washer	2
5	• 040-0312-41	• Screw	2
6	• 122547	• Set Screw	3
7	• 122550	• Light Arm Stop Bumper	1
8	• 042-0206-00	• Screw	1
9	• 050-5100-50	• Extension Plate	1
10	• 122553	• Stop Nut	1
11	• 122549	• Unit Arm Stop Bumper	1
12	• 107995	• Screw	1
13	• 050-4920-50	• Nut Plate	1
14		Refer to: **Midmark Dental Chair Service & Parts Manual (004-0287-00)**	

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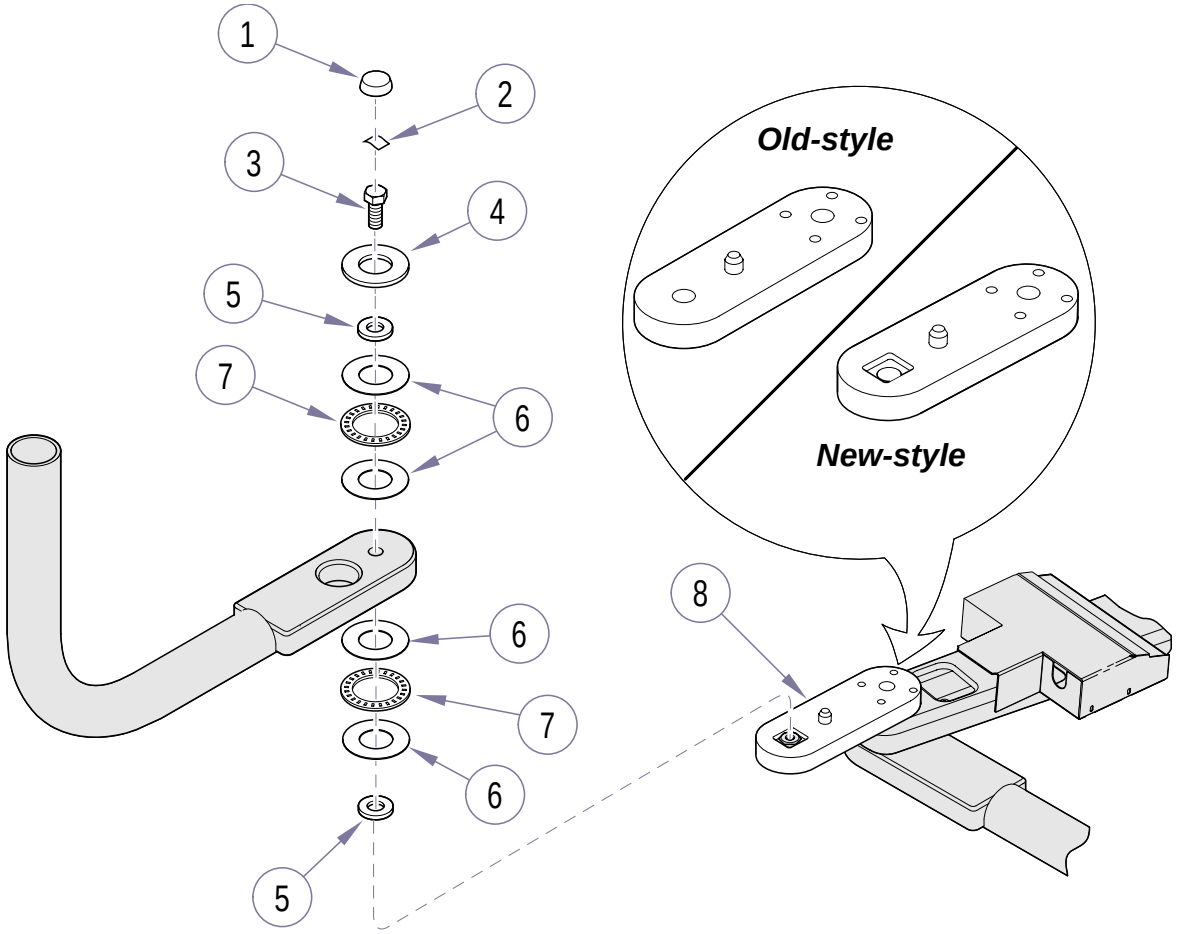
LR Bearing Upgrade Kit - *Midmark Chairs*



ATTENTION!
If replacement bearings, washers, etc. are required <u>after the bearing upgrade has been made</u>, refer to *LR Lower Arm Assembly (Serial Number page starting with NW2379).*

DA132700i

Item	Part No.	Description	Quantity
		Chairs w/New-style Adapter Plate	
	002-0731-00	**LR Bearing Kit only**	
		(includes items 1 thru 7)	1
		Chairs w/Old-style Adapter Plate	
	002-0690-00	**LR Bearing Kit w/Adapter Plate**	
		(includes items 1 thru 8)	1

Item	Part No.	Description	Quantity
1	• 053-1360-00	• Bolt Cover	1
2	• 275184	• Double-sided Tape	AR
3	•	• Bolt	1
4	•	• Bearing Spacer	1
5	•	• Thrust Washer	4
6	•	• Thrust Bearing	2
7	•	• Spacer	2
8	• 029-2696-01	• Adapter Plate *(new-style)*	1

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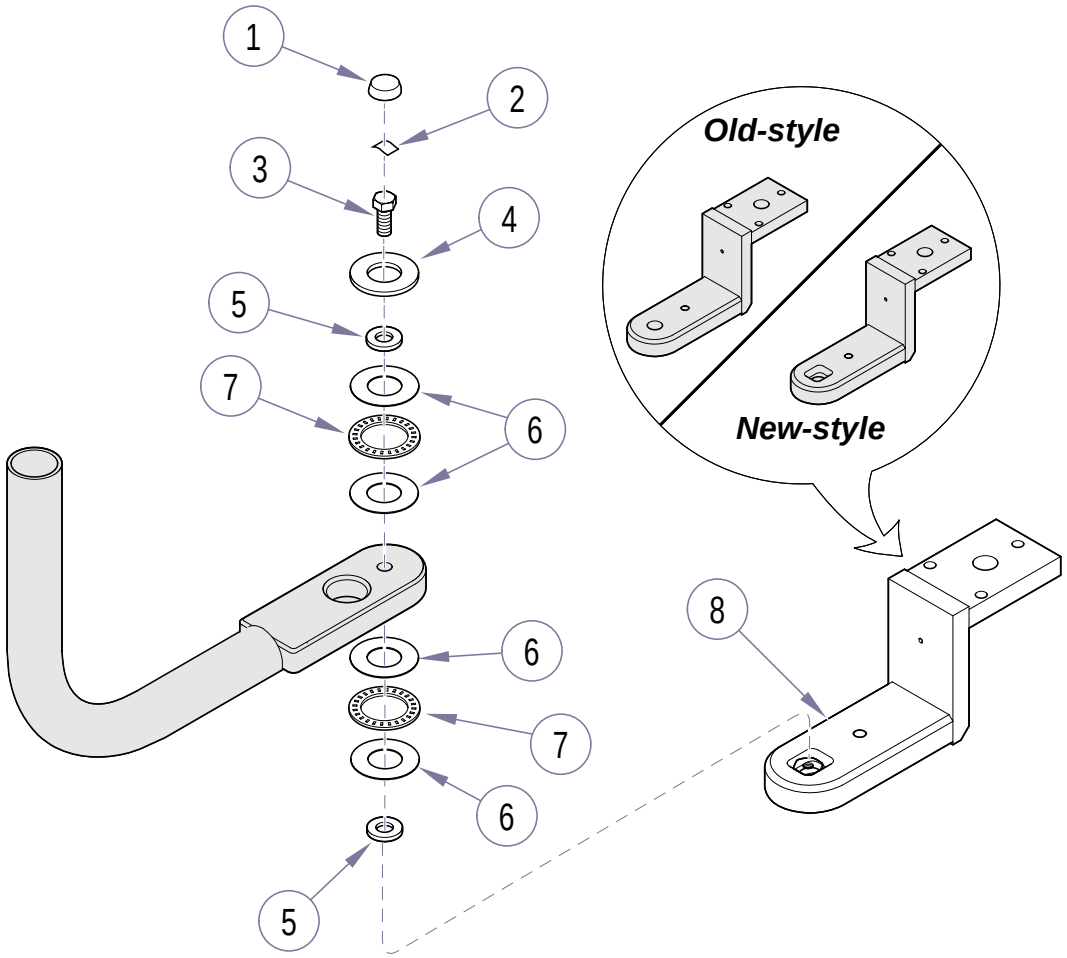
LR Bearing Upgrade Kit - *Knight Chairs*



ATTENTION!
If replacement bearings, washers, etc. are required <u>after the bearing upgrade has been made</u>, refer to *LR Lower Arm Assembly (Serial Number page starting with NW2379).*

DA132600i

Item	Part No.	Description	Quantity
		Chairs w/New-style Bracket	
	002-0731-00	**LR Bearing Kit only**	
		(includes items 1 thru 7)	1
		Chairs w/Old-style Bracket	
	002-0743-00	**LR Bearing Kit w/Bracket**	
		(includes items 1 thru 8)	1

Item	Part No.	Description	Quantity
1	• 053-1360-00	• Bolt Cover	1
2	• 275184	• Double-sided Tape	AR
3	•	• Bolt	1
4	•	• Bearing Spacer	1
5	•	• Thrust Washer	4
6	•	• Thrust Bearing	2
7	•	• Spacer	2
8	• 029-3002-00	• Knight LR Bracket	1

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Return To Table Of Contents

COMMENTS

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Description of Error or Desired Change:

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Return To Table Of Contents

FAX ORDERING FORM

(SERVICE PARTS ONLY)

NOTES:

- **ALL BLOCKED AREAS MUST BE COMPLETED.**
- **USE FOR NON-WARRANTY FAX ORDERS ONLY. WARRANTY ORDERS MUST BE TELEPHONED IN (1-800-MIDMARK).**

ATTENTION: SERVICE DEPARTMENT FAX#: 877-249-1793

ACCT #: _____ **P.O. #:** _____ **DATE:** _____

NAME: _____ **SHIP TO:** _____

ADDRESS: _____

CITY, ST.: _____

CONTACT: _____

PHONE: _____

☐ **NON-EMERGENCY ORDER - TO SHIP WITHIN 72 HOURS IF PART(S) IN STOCK.**

☐ **EMERGENCY ORDER - TO SHIP WITHIN 24 HOURS IF PART(S) IN STOCK (IF ORDER IS RECEIVED BEFORE 1:30 P.M. E.S.T).**

SEND NOTIFICATION IF PARTS ARE NOT AVAILABLE TO SHIP WITHIN 24 HOURS VIA E-MAIL OR FAX TO: _____

METHOD OF SHIPMENT **OTHER** _____

UPS	FED EX
☐ NEXT DAY A.M.	☐ NEXT DAY A.M.
☐ NEXT DAY P.M.	☐ NEXT DAY P.M.
☐ 2ND DAY	☐ 2ND DAY
☐ GROUND	☐ ECONOMY

QTY.	PART #	DESCRIPTION (SPECIFY COLOR OF ITEM IF APPLICABLE)	COLOR CODE	PRICE/PER
			TOTAL COST: $	

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Return To Table Of Contents

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